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ABSTRACT

This collection of papers is the first in a series resulting from the Polish-English Contrastive Project. The overall purposes of the project are to prepare a Polish-English contrastive grammar and to develop pedagogical materials. The basic model used for the research is the transformational generative one. The papers included in this volume are as follows: (1) "The Polish-English Contrastive Project," Jacek Fisiak; (2) "Contrastive Analysis in the Classroom," Waldemar Marton; (3) "Some Grammatical Implications of the Contrastive Analysis of English Sentence Adverbs and Their Equivalents in Polish," Tadeusz Zabrocki; (4) "Some Differences between English and Polish on the level of the Basic Sentence Pattern, "Maria Lipinska; (5) "A Contrastive Analysis of Linking Verbs in English and German," Wolf-Dietrich Bald; (6) "Some Surface and Deep Aspects of Case in Polish and English," Stefan Konderski; (7) "'Must' and Its Equivalents in Polish," Piotr Kakietek; (8) "Some Remarks on the Relation between the Complementizer and the Form of the Verb in the Complement Structure in English and Polish," Anna Morel; (9) "The Polish and English Fricatives - a Problem in Phonological Equivalence," Andrzej Kopczynski; (10) "Aspects of Emotive Language: Intensity in English and Polish," Bogdan Lawendowski; (11) "On the Concept of 'Instrumental Case," Tomasz P. Krzeszowski; (12) "The Function of Translation in Foreign Language Teaching," Elzbieta Muskat-Tabakowska; and (13) "Bibliography of English-Polish Contrastive Studies in Poland," Tadeusz Zabrocki. (TL)

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THE POLISH-ENGLISH CONTRASTIVE PROJECT

PAPERS AND STUDIES IN CONTRASTIVE LINGUISTICS

VOLUME ONE

KARPACZ CONFERENCE ON CONTRASTIVE LINGUISTICS
(16 - 18 DECEMBER 1971)

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PREFACE

The present volume of *PAPERS AND STUDIES IN CONTRASTIVE LINGUISTICS* is the first in a new series of publications devoted to Polish-English contrastive studies. Each volume of PAPERS AND STUDIES, which will appear at irregular intervals, will carry original papers and longer studies as well as book reviews and abstracts of doctoral and more interesting master's theses on the subject of contrastive linguistics.

Although the Polish-English project has been under way for several years, very little has been published so far and then only in journals or conference proceedings. It is hoped that our present series of publications will fill this gap and will provide some information on the main trends of the project and its accomplishments and problems.

The first volume of PAPERS contains nine of eleven papers delivered at the Second Karpacz Conference on Contrastive Linguistics held on 16 - 18 December 1971. Unfortunately, two valuable contributions i.e. those of Doc. dr K. Polański (Poznań) and Mr. P. van Buren (Edinburgh), have not been submitted and consequently are not printed in the present collection.

In addition to the papers presented at Karpacz, two more papers which were to be read there (Kakietek and Kopczyński) but were not presented due to the absence of the authors have been also included in this volume.

Since the Polish-English project is not widely known because of the scarcity of printed materials, it has been considered advisable to add some information which could form a sufficient background for the reader who is not familiar with our work. We hope that Professor J. Fisiak's description of the project and the bibliography on Polish-English contrastive linguistics compiled by T. Zabrocki will fill this gap.

All the Karpacz papers with the exception of one (Krzeszowski) are related to various areas of contrastive studies. Some of them are of a highly abstract and theoretical nature and will certainly be of interest to linguists. A few are of a more practical character and, therefore, should be of interest to language teachers.

The fact that both theoretical and applied aspects of contrastive studies have been covered in the present volume reflects the idea of our project, i.e. that it can substantially contribute to linguistic theory as well as to the solution of some practical problems in language teaching.

J. F.

Poznań, March 1972

THE POLISH-ENGLISH CONTRASTIVE PROJECT *

JACEK FISIAK

Adam Mickiewicz University, Poznań

Polish-English contrastive studies in Poland began to develop in a systematic way seven years ago. The idea for an organized research project in that area was launched by the author in 1964. In 1965 when the Institute was reopened at the University of Poznań, the project assumed a definite shape and several topics were immediately assigned as Ph. D. dissertations. These dissertations together with some narrower research problems were considered as pilot projects for a larger contrastive studies project with several objectives as outlined below.

Although the core of researchers consisted of the Poznań Institute staff members, a numerous group of young linguists from Łódź and Warsaw joined the project and began to collaborate from the outset.

The first analyses undertaken in 1965 were based on either structural or transformational models, depending on the prior linguistic training of the project's participants. However, early in 1967 it was accepted that the most explicit model should be used as the basis for an adequate contrastive analysis and consequently the transformational generative model has been adopted since then, in spite of its numerous weaknesses which were noticed but which in our opinion could not be a sufficient reason for considering TG a less adequate theory than traditional or structural. These weaknesses, in fact, opened new vistas for contrastive studies and served as a basis for new theoretical objectives for them.

From the beginning it has been accepted that the term "contrastive studies" should be used in a broader sense including both the studies of the differences and similarities between two languages under comparison, for it is obvious that the ability to differentiate also implies the ability to identify, i.e. differences and similarities are in complementary distribution, and no complete characterization of one language vis-a-vis another can be given without taking both these aspects into consideration.

Since 1966 it has also been recognized that contrastive studies are of two basic types:

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* This is a revised version of the paper read at the 1970 Zagreb Conference on English Contrastive Projects, Zagreb, 7 - 9 December 1970.

1. *GENERAL THEORETICAL CONTRASTIVE STUDIES* which are a part of typological linguistics, their aim being among other things to *construct an adequate model* for the comparison of two languages (including the formalization of such fundamental notions as *congruence, equivalence, correspondence*, etc.), to determine a method for quantifying the divergence and convergence of two languages or language components as, perhaps, a new universal, etc.

General theoretical contrastive studies are basic for SPECIFIC THEORETICAL CONTRASTIVE STUDIES (i.e. Polish-English, Hungarian-English, etc.) which by using the model constructed by the former should produce an exhaustive account of the differences and similarities between a given pair of languages. It should be noted that the comparison of any two languages should be made in abstract terms, i.e. the rules of the grammars of both languages should be compared and not their ultimate surface products. They should be bi-directional.

The relation between GENERAL and SPECIFIC theoretical contrastive studies may be considered as approximately parallel to the relation between UNIVERSAL grammar and the grammars of particular languages.

2. *GENERAL APPLIED CONTRASTIVE STUDIES* belong to applied linguistics. It has been assumed that they should provide a proper model for the comparison of two languages for a specific purpose (e.g., a simplification of the theoretical model for pedagogical purposes as illustrated by the use of "surface phonology" vs. "deep phonology"). General applied contrastive studies should also provide methods for the prediction of interference as well as for establishing the hierarchy of difficulty in learning the categories in a foreign language, etc.

The results and methods of general applied contrastive studies and the findings of specific theoretical contrastive studies should be utilized by SPECIFIC APPLIED CONTRASTIVE STUDIES for a given pair of languages to facilitate the preparation of proper teaching materials (e.g., for determining the appropriate selection, gradation, restrictions), the construction of language tests and the choice of teaching strategies.

Needless to say, since no generally accepted theory of contrastive studies has thus far been proposed, what has been said above constitutes only a working framework for our research, determining the directions of our investigations and the objectives of our project. We feel that these objectives should

(1.) contribute to a theory of contrastive linguistics,
(2.) contribute to a theory of language in general,
(3.) contribute to the grammars of English and Polish,

(4.) provide an exhaustive contrastive grammar of English and Polish, both theoretical and applied, and
(5.) provide material for teaching English to Polish speakers and vice versa.

It should be pointed out that items (4.) and (5.) are central to our project even though items (1.), (2.) and (3.) are of no less interest or importance.

The purpose of the first pilot projects (1965 - 67) was to provide segments of a Polish-English contrastive grammar in the areas of syntax and phonology as well as to answer the question of adequacy of a given linguistic model (structural or transformational) for contrastive studies: i.e. the aims were mainly theoretical.

During that period two larger pilot projects (doctoral dissertations) were completed:

(1.) Krzeszowski, T. P., 1966. *Some Types of English and Polish Verb Phrases* (unpubl.).
(2.) Granicka, I., 1967. *English Past Tenses and Polish Aspect* (unpubl.).

Furthermore, twenty-seven reports on individual problems of Polish-English contrastive grammar or on research in progress were presented at seminars held in Poznań once a month. Some of them appeared in print.

The most important theoretical papers on contrastive grammar published between 1965 and 1967 were:

(1.) Cygan, J., 1965. "On the System of Negation in English and Polish". *Language Learning* 15. 17 - 28.
(2.) Cygan, J., 1966. "Czas i aspekt w języku angielskim i polskim" (Tense and Aspect in English and Polish). *Języki Obce w Szkole* 1. 130 - 144.
(3.) Krzeszowski, T. P., 1967. "Fundamental Principles of Structural Contrastive Studies". *Glottodidactica* II, 33 - 40.

The applied aspects of contrastive studies, rather marginal in our project prior to 1968, were not totally neglected. Six reports on their pedagogical implications were published in 1966 and later.

The most important contributions published in the area were:
Krzeszowski, T. P., 1966. "English Tense Expressing Verb Phrases in the Process of Teaching Polish Students". *Glottodidactica* I. 115 - 124.
Cygan, J., 1967. "English Question Structures and the Polish Learner". *Glottodidactica* II. 85 - 93.

In December 1967 the research team consisted of twenty-one linguists (from Poznań — 10, Łódź — 3, Warsaw — 6, Wrocław — 2). It was accepted then that the transformational model would be employed in our contrastive project from that moment on, with the proviso that the two most

advanced pilot projects would be continued and completed within a structural framework.

With three years of research experience in contrastive studies we decided that the POZNAŃ POLISH-ENGLISH CONTRASTIVE PROJECT should become a ten-year project consisting of the following three stages:

1. 1968 - 1970: a continuation of organized intensive research in various areas of Polish-English contrastive grammar (phonology and syntax).
2. 1971 - 1973: a continuation of intensive organized research (phonology, syntax and semantics) and the preparation of a three-volume Polish--English contrastive grammar, both theoretical and applied.
3. 1974 - 1977: publication of the above-mentioned work and the preparation and publication of teaching materials.

It should be noted, however, that Stage 3 does not exclude further research on certain theoretical problems nor is the preparation of teaching materials (e.g., phonetics) excluded from Stage 2.

At the present time the project is being directed by three members of the Institute of English at the University of Poznań. Professor Dr. Jacek Fisiak, Director of the Institute, has been serving as director of the whole project since 1965. Since 1967 Dr. Kazimierz Polański has been responsible for the Polish language section, while Dr. Waldemar Marton has been in charge of the applied linguistics section for the past two years.

During the first stage of our project research efforts have been concentrated on monographs (doctoral dissertations) covering wider areas of Polish-English contrastive grammar as well as on reports discussing various issues concerning general theoretical contrastive studies. The following doctoral dissertations have been completed since 1968 or are about to be completed:

(1.) Marton, W., 1968. *Noun Modification in English and Polish.* Unpubl. (Prof. Dr. Jacek Fisiak supervisor)

(2.) Kopczyński, A., 1968. *English and Polish Consonant Phonemes.* Unpubl. (Prof. Dr. J. Fisiak supervisor)

(3.) Arabski, J., 1971. *Infinitival Constructions in English and Polish.* (Prof. Dr. Jacek Fisiak supervisor)

(4.) Zabrocki, T., 1972. *Sentence Adverbs in English and Polish.* (Prof. Dr. Jacek Fisiak supervisor)

(5.) Lipińska, M., 1972. *Basic Sentence Patterns in English and Polish.* (Prof. Dr. Jacek Fisiak supervisor)

(6.) Kuczyński, A., (in progress) *Adverbs of Place, Time and Manner in English and Polish.* (Prof. Dr. Jacek Fisiak supervisor)

(7.) Jakubczak, I., 1972. *Relative Clauses in English and Polish.* (Doc. Dr. Kazimierz Polański supervisor)

(8). Majchrzak, K., (in progress) *Fraza nominalna w języku angielskim i polskim* (The Noun Phrase in English and Polish). (Doc. Dr. Kazimierz Polański supervisor)

(9.) Grala, M., 1972. *Participial Constructions in English and Polish.* (Doc. Dr. Kazimierz Polański supervisor)

(10.) Oleksy, W., (in progress) *Interrogative Constructions in English and Polish.* (Doc. Dr. Kazimierz Polański supervisor)

(11.) Zybert, J., (in progress) *English and Polish Vowels in Contact.* (Prof. Dr. Jacek Fisiak supervisor)

(12.) Morel, A., (in progress) *Verb Complementation in English and Polish.* (Doc. Dr. Kazimierz Polański supervisor)

(13.) Mieszek, A., (in progress) *Cleft Sentences in English and Polish.* (Prof. Dr. Jacek Fisiak supervisor)

(14.) Mendelius, C., (in progress) *Pronominalizations in English and Polish.* (Prof. Dr. Jacek Fisiak supervisor)

(15.) Staszewski, J., (in progress) *The Ways of Expressing Purpose in English and Polish.* (Doc. Dr. Kazimierz Polański supervisor)

(16.) Szewczyk, H., (in progress) *Aspects of Word-Order and Its Communicative Function in English and Polish.* (Doc. Dr. Kazimierz Polański supervisor)

(17.) Furman, A., (in progress) *Prefixation of Verbs in Polish and Its Equivalents in English.* (Doc. Dr. Kazimierz Polański supervisor)

(18.) Jakóbczyk, M., (in progress) *Ways of Expressing Accessory Circumstances in Polish and English.* (Doc. Dr. Kazimierz Polański supervisor)

Several works concerning the theoretical aspects of contrastive studies have been presented at seminars and conferences. The most important of them to date have been:

(1.) Krzeszowski, T. P., 1968. "The Place of Contrastive Studies in Modern Linguistics". Unpubl.

(2.) Marton , W., 1968. "Transformational Contrastive Studies: Some Methodological Remarks". Unpubl.

(3.) Marton, W., 1968. "Equivalence and Congruence in Transformational Contrastive Studies". *Studia Anglica Posnaniensia.* 1. 53 - 62.

(4.) Fisiak, J., 1968. "Phonological Contrastive Studies: *Methodological Considerations*". Unpubl.

(5.) Marton, W., 1969. "English and Polish Nominal Compounds: A Transformational Contrastive Study". *Studia Anglica Posnaniensia* 2. 59 - 72.

(6.) Fisiak, J., 1970. "The Case Grammar and Contrastive Studies". Unpubl.

The analysis of English errors made by Polish students was included additionally in our project in 1967. A report on the subject was presented and subsequently published (Arabski, J., 1968. "A Linguistic Analysis of English Composition Errors Made by Polish Students". *Studia Anglica Posnaniensia* 1. 71 - 89). An extensive monograph and further studies should appear in print between 1972 and 1975.

In 1967 we began to assemble our own corpus of English and semantically corresponding Polish sentences on punch cards. The sentences were taken from novels, magazines and scientific works. In 1969 the corpus consisted of 100,000 English sentences and approximately the same number of Polish sentences. The corpus is considered only as an aid to our research workers and has been used by them since 1968.

This year the encoding of information concerning both English and Polish has been initiated and should be completed by the end of 1973. This will make the information concerning various aspects of the structure of English and Polish more easily accessible. Our corpus, however, is not designated for computer processing.

Since 1968 a Polish language corpus gathered in Katowice has also been at our disposal and has frequently been used by our project participants. We would like to point out that at present we do not foresee any possibility of using computers in our project.

The project has been subsidized since 1965 only by limited funds from the University of Poznań, and this in turn has by and large determined the scope and progress of the research which has been undertaken.

In the autumn of 1969 the Ford Foundation expressed some interest in contributing to the financing of the project through the Center for Applied Linguistics, and consequently preliminary negotiations were held in spring and summer 1970 in Washington, D. C., between Dr. J. Lotz, Dr. W. Nemser, Dr. Hood Roberts and Prof. Dr. Jacek Fisiak.

The collaboration between the Center for Applied Linguistics and Poznań began in March 1972 and we hope that it will help us to complete the contrastive grammar of English and Polish, both theoretical and applied, much more quickly and throughly than originally expected. This, of course, will automatically speed up the preparation of teaching materials.

In order to handle the new situation successfully a conference of all prospective collaborators including the participation of Dr. W. Nemser of the Center for Applied Linguistics was held at Karpacz between December 17 and 19, 1970. During this conference five research teams were organized composed of seventy five members from Poznań, Wrocław,

Warsaw, Cracow and Łódź. Since then the centers have been conducting research in their assigned areas. Poznań has also been serving as the administration and coordination center.

The results of individual research presented in theses, monographs, papers and reports will be first published in our new series of PAPERS AND STUDIES IN POLISH-ENGLISH CONTRASTIVE LINGUISTICS and will be later summarized in three major volumes which will then form the basis for further publications in the area of applied Polish-English contrastive studies and teaching materials. We plan to publish the three volumes as follows:

(1.) J. Fisiak, K. Polański, A. Kopczyński. *The Sounds of English and Polish.* (1973)

(2.) K. Polański, J. Fisiak, W. Marton. *The Syntax of English and Polish.* (1974)

(3.) K. Polański, et al. *The Lexicon of English and Polish.* (ca. 1975)

The publication of the following handbooks should be possible from 1972 onward:

(1.) J. Arabski. *A Manual of Polish Phonetics for English Speakers.* (1974)

(2.) H. Grabińska. *Language Laboratory Manual of English Phonetics for Polish Students* (1972 - 73)

(3.) W. Marton, et al. *The Syntactic Structures of English.* Five volumes. Volume I (1975)

(4.) K. Polański. *A Comprehensive Polish Grammar for Speakers of English* (1973?)

Other materials and tests will later be based on the theoretical results obtained from our research. Thus, summing up this brief account of the Poznań Polish-English Contrastive Project, let me point out that in our opinion the project has both theoretical linguistic values as well as pedagogical and can contribute just as other similar projects have to a better understanding of language, its nature and use.

CONTRASTIVE ANALYSIS IN THE CLASSROOM

WALDEMAR MARTON
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The paper which I presented at the conference in Karpacz last year dealt wit various pedagogical implications and applications of contrastive studies in connection with the designing of syllabuses for language courses and the preparation of teaching materials. Lately a number of articles and papers have appeared which envisage the pedagogical application of CS in essentially the same way, i.e., for designing syllabuses and preparing teaching materials, usually emphasizing at the same time that it is impossible and contrary to sound pedagogical knowledge to think of a deliberate and systematic use of contrative analysis in the classroom. Now my contention is that CA has great pedagogical value precisely in day-to-day teaching in the classroom, as a useful technique for presenting language materials to the learner and as one of the characteristic aspects of a method of teaching. This paper is a justification of my point of view. Certainly the pedagogical usefulness of this particular application of CA which I have in mind is only a hypothesis, but to justify it I shall adopt a procedure characteristic of pedagogical methodology, i.e., first I shall show that my proposal does not contradict the findings of source such as the psychology of learing and psycho-linguistics and that, on the contrary, it is supported by many facts discovered by these disciplines. Then, I shall show that some of the statements which run counter to my claim have no validity from the point of view of contemporary knowledge. Finally, I shall say a few more words about how I imagine the use of CS in the classroom. Let me make one more point at the beginning concerning the present confusion in the field of language teaching methodology. I am of the opinion that a lot of this confusion is unnecessary, because, although second language learning has its specific aspects, it has many features in common with other kinds of learning, especially in what concerns concept formation, acquisition of habits and skills, and the working of memory. Any psychologist will tell us that quite a lot is known today about these and other aspects of learning and, actually, many ideas have been lying around for quite some time without language teachers making any use of them. I am, therefore, totally in opposition to the "new orthodoxy" in language

learning and teaching, represented by such scholars as Leon Jakobovits, Leonard Newmark, David Reibel, and others, who claim that both first and second language learning is some mysterious process following its course independently of the intentions of the teacher and learner, and that all we can do is not to interfere with it.

One of the main assumptions of my approach is that the native language of the learner is a very powerful factor in second language acquisition and one which cannot be eliminated from the process of learning. I am referring here to the situation of language teaching in our schools and various language courses, which, from a psychological point of view, is completely different from the situation of learning a language in the country where it is spoken, or learning it in a very intensive course of total immersion. In the two cases of learing a language in the country where it is spoken or in an intensive course, there are plenty of opportunities for observation and testing one's detailed hypotheses concerning various aspects of the language. But even in these conditions it is very dubious that language habits are formed automatically and by mere exposure to language data, especially in an adult learner.

In our schools, one of the most important language learning problems is remembering the various features of foreign language learnt in class or during home study. In this respect the crucial problem is that of retroactive inhibition. Certainly the use of the native language between the foreign language classes, or between a foreign language class and an occasional use of the foreign language in some other situation, is an interpolated activity strengthening retroactive inhibition. Reasoning in terms of stimuli and responses, we can assume that meanings which an individual wants to express are stimuli, and their encodings into signs of a particular language are responses.

It is probably safe to say that no one would deny the existence of the powerful influence of retroactive inhibition, regarded by linguists as "linguistic interference", on second language learning. It is also becoming clearer and clearer how strong and persistent the habits of expressing meanings in the native language are, so that they even manifest themselves in individuals who have spent long years in a foreign country functioning primarily in the language spoken in that country. A. A. Leontiew, one of the top contemporary Soviet psycholinguists and methodologists, writes about this problem (1970 : 19):

> "The phenomenon of transferring skills and habits of the mother-tongue onto a second language takes place independently of our efforts to limit it by a special method, e.g., by a direct method. This kind of transfer is deeply rooted in some general principles of the transfer of knowledge, or, rather,

the transfer of corrective measures, as it is more economical to be aware of and to automatize some corrections concerning the already existing knowledge than to start building a system of knowledge from scratch".

The question then suggests itself whether it isn't better to use this habitual transfer in some way rather than desperately trying to fight it and eradicate it, or even to deny its existence. I think that using CA in the classroom would go a long way towards controlling this powerful tendency and making an ally of what has long been considered our greatest enemy. The persistence and strength of language interference is readily explained by the well-established fact that retroactive inhibition is greatest where the stimuli for the learned task and the stimuli for the interpolated activity are the same, but the required responses are different. This is exactly the case with second language learning in school situations, where the meanings we want to express in the native and second language are usually the same, but call for different encodings. As Borger and Seaborne (1966 : 156) put it, "Confusion is greatest when on separate occasions people are called upon to behave in different ways under similar circumstances". What is known about the working of memory also suggests that the process of remembering things and storing them in long-term memory cannot be likened to faithful recording on tape. There seem to be receptive processes involved here which take in and store new information in terms of previously organized material and which result in progressive distortion of the learned material over a period of time (Borger and Seaborne 1966 : 165). The same idea has been stressed by the Gestalt school in their concept of cognitive structure, into which all new bits and pieces of knowledge are fitted in. This particular aspect of memory change has been emphasized by Bartlett (1932). Actually, the results of his experimental studies imply more than simply that learned material is distorted during learning; the distortion, or, in other words, assimilation to pre-existing structures, continues after removal of the original material. This points to a more dynamic aspect of language interference, which is often neglected by linguists dealing with the problem. Taking a psychological point of view, we can say that there is never peaceful coexistence between the two language systems in the learner, but rather constant warfare, and that this warfare is not limited to the moment of cognition, but continues during the period of storing newly learnt items in memory. Accordingly, every Polish sentence I hear, speak, read, or write impairs my English. The reverse is also true, but the so-called "backlash interference" is not really dangerous in the learning conditions which I have in mind, so I shall not deal with it in the present paper. Taking all of this into

sideration, we might conclude that as the process of comparison is going to take place anyway, it is better to make it conscious and channel it to profitable uses, at the same time preventing distortion resulting from uncontrolled assimilation.

Another interesting psychological fact is how much the amount of retroactive inhibition depends on the method of learning used for the task material as compared to the method of learning used for the interpolated material. Experiments by Jenkins and Postman (1949) and by Budohoska (1966) clearly indicate that if the method for learning the interpolated material is essentially the same as the method for learning the task material, retroactive inhibition is markedly increased. Conversely, if the methods are essentially different, retroactive inhibition is decreased. If we assume that the use of the first language can be regarded as the practicing and learning of the interpolated activity, it becomes obvious that the claim made by numerous methodologists that second language learning should copy the processes characteristic of first language learning is not as psychologically sound as it seems to be at first sight. From this point of view, then, it is perhaps desirable that a method for second language learning should be characterized by cognitive elements which would differentiate it from first language acquisition.

Another important factor lessening the amount of retroactive inhibition is the set or readiness of a learner to prevent its interfering influence. A classical experiment carried out by Lester (1932) with four groups of subjects differently instructed and made aware of the existence of interference from interpolated activities demonstrated very clearly that the subjects who were warned and shown where the interference would appear and who were also instructed how to fight it did incomparably better on the re-testing of the learned material than the subjects who were not so instructed. It follows that warning the learner of language interference, showing him clearly and in advance where it may appear and what he should keep in mind to curb it, may greatly facilitate second language learning.

These are only a few of the psychological facts which might be cited to support the idea of using CA in the classroom, in the stage of the presentation of language material. Various objections, however, have been raised to this kind of cognitive approach.

It has been clear by now that this approach is also characterized by the use of grammatical explanations and rules and their conscious application in language teaching and learning. Most of the scholars and teachers voicing objections to this method would treat any contrastive statements presented to the learner as increasing the amount of verbalization and rules and, hence, detrimental to the acquisition of competence

in the foreign language. The essence of these objections is that any conscious application of verbalized rules makes speech and aural comprehension in the foreign language reflective and slow, and thus renders the acquisition of oral-aural skills impossible. This sort of attitude is well expressed by Sol Saporta (1966 : 86), who writes,

> "Language is rule-governed behaviour, and learning a language involves internalizing the rules. But the ability or inclination to formulate the rules apparently interferes with the performance which is supposed to lead to making the application of the rules automatic".

A very serious and persistent misunderstanding underlies all such statements and objections. The misunderstanding consists in treating all applications of rules and comparative statements as static and unchangeable in character. It seems that Saporta and other theoreticians like him think that if a learner has learnt something about the target language via rules and verbalizations, he will have forever to recall all the appropriate rules and verbalizations in exactly the same form in which he learnt them whenever he wants to say something in the language. But the psychological fact is that all these rules and verbalizations, if not studied for their own sake, help mainly to gain insight and understanding about the functioning of some element of the target language and form a helpful crutch mainly in the initial stages of language use. Then the rules are reduced through practice and probably, to a large extent, wear out completely and are not consulted at all in actual use of the language, although they may be stored, ready to be recalled, at some higher level of the conscious knowledge about the language. It seems that the more often the given rule or verbalization has been applied in real or simulated communication by the learner, the less need he has to recall it consciously. In this aspect John B. Carrol (1971) is of the opinion that the opposition between "rule-governed behavior" and "habits" is false, because language rules are descriptions of language habits and we may proceed from the conscious application of rules to habits. A. A. Leontiew expresses the same view when he writes, (1970)

> "A habit may be formed in a bottom-to-top way, as a result of imitation, or in a top-to-bottom way, as a result of automatization and reduction of knowledge".

These statements can be borne out by the experience of many foreign language learners, including myself, who have learnt their language through the conscious application of rules, but whose language performance is not marked by any conscious or reflective processes. (This is just like the acquisition of any skill where, in any stage of learning, we have a number of fully automatized activities and at least one being

consciously acquired, which becomes automatic in turn). All the objections like the one given above ignore one of the fundamental psychological laws of learning, which says that the way in which we learn something does not forever determine the way in which we put this knowledge to use later on. It follows then that the gains from CA in the better understanding and retention of the target language material do not have to be offset by slowing down the processes of habit formation. Another widespread objection to the approach I am suggesting here is that it leads to compound bilingualism in which the native language of the learner is used as a matrix of reference for the use of his second language. But today the classical division of learners into compound and coordinate bilinguals is becoming more and more dubious from a psychological point of view. Among psycholinguists and sociolinguists concerned with the issue, the opinion prevails that we can talk not so much about types of bilinguals, but rather about types of bilingual functioning (Fishman : 1966). Some psycholinguists give also evidence for the fact that even the dominance of a particular type of bilingual functioning in an individual is a very unstable thing and changes according to circumstances (E. Ingram, personal communication). Be that as it may, it is difficult to conceive of a learner keeping his two languages separate in a situation comparable to the situation in which the Polish secondary school pupil finds himself. The concept of thinking in a foreign language, stressed to such a degree by Byelyayev (1964) is also quite irrelevant to our considerations, as it confuses thinking in general and particularly operational thinking — which is never completely verbal — with inner speech or inner monologue. Granted, practicing inner speech in second language may very effectively help to master it, but it is something that cannot be taught; it can be only recommended.

Another objection is that the experience with the grammar-translation method has shown that the approach based on grammatical analysis and translation is ineffective. But it is ineffective from the point of view of today's objectives set up for the language learner, i.e., the acquisition of aural-oral skills. Experimental studies by scholars such as Scherer and Wertheimer (1964) and Smith (1970) have proved that there is no marked advantage in employing strictly audio-lingual techniques even if speaking and aural comprehension are the essential objectives. If anything, these studies have shown, as Carroll (1971) puts it, that "... students learn precisely what they are taught, or at least that transfer of learning is a two-way street between aural-oral and reading-writing skills".

The reasoning I have just presented is supported by some empirical evidence. As the scope of this paper is strictly limited, let me only

mention the experimental data described by Lambert, Gardner, Barik, and Tunstall (Lambert : 1967), who found that in a very intensive language course taught by a direct method, those students who kept their two languages functionally separated throughout the course did not do as well in their work as those who permitted the semantic features of their two languages to interact.

And now, finally, a few words about how I envisage the use of CS in the classroom. First of all, I think it should be based on semantics; that is, the teacher should show how certain meanings, e.g., expressing futurity, are realized syntactically in Polish and in English, and not merely point out differences between language forms. In introducing the use of the Present Tense for expressing futurity in English, the teacher should (1) point out that in Polish the Present Tense is also used for the same purpose, then (2) show the similarities and differences in usage in the two languages, (3) set up the limits for drawing analogies and (4) warn about the areas of possible negative transfer and confusion. All of this should be done before the practising of the given structure so that the habits are formed on a conscious, cognitive basis. Frequent use of translation as a perfect contrastive technique for learning grammatical structures would be one of the characteristics of this approach, although it would not become the only or even the main technique. Such an application of CA should be carried out on all levels of grammatical description, i.e., on the phonological, lexical and syntactic levels.

The hypothesis presented here requires verification by an experiment or rather by putting it to a test by a large number of teachers in a large number of courses. This again involves the necessity of writing a good pedagogical contrastive grammar which is the first and most important task in the area of the pedagogical application of CS. Language teachers should also be prepared for the use of CA in the classroom through a systematic study of CA of the two languages involved in the process of learning. This is why a course in CA should become a part of the syllabus in all philological departments of our universities and in all in-service teacher training courses.

If the approach outlined above is confirmed by experience in learning and teaching under certain specifiable circumstances, CS will be demonstrated to have greater pedagogical value than was ever claimed before.

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SOME GRAMMATICAL IMPLICATIONS OF THE CONSTRASTIVE ANALYSIS OF ENGLISH SENTENCE ADVERBS AND THEIR EQUIVALENTS IN POLISH

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The aim of this paper is to show an example of a certain type of linguistic (as opposed to pedagogical) implications that may be derived from the systematic comparison of the structures of two languages which is called "contrastive analysis". First, it will be shown how the existence of some "grammatical words" in the surface structure of certain Polish sentences testifies on behalf of the particular hypothesis as to the deep syntactic structure of their translation equivalents in English. Secondly, we will see how the tentative proposal as to the deep structure of some expressions in English receives an additional justification from the Polish data, when the tentative character of the original hypothesis was due to the unproductive character of certain transformational processes.

It appears that if the linguists working within this aras of study (contrastive analysis) were urged to focus their attention on the facts similiar to those which will be described here, their investigations, being usually conducted with the practical aim in view, might produce some interesting "by-products" that would justify their laborious and often tedious work no matter what is the real value of their transfer predictions and error explanations denied recently by many linguists and language teaching specialists.

Contrastive analysis grew as the result of the practical demands of language teaching methodology, where it was empirically shown that the errors which are made recurrently by foreign language students can be often traced back to the differences in structure between the target language and the native language of the learner. It has been claimed that the interference can be explained, predicted and possibly eliminated by the subsequent application of some proper pedagogical techniques once we had realized what these differences are. This naturally implied the necessity of the detailed comparison of the structures of a native and a target language, which has been named „contrastive analysis".

The type of comparison that was usually applied here can be called practical. Typically, after the theoretical linguistic model had been chosen, the grammars of the two languages, written within this theoretical framework, were subjected to comparison so that the points of contrast were established leading to the subsequent formulation of the set of tacit transfer predictions. The theoretical linguistic model adopted was usually informal, often openly inexplicit and simplified, in order to make the description available to the foreign language teacher and the advanced language student. Moreover, the model was often eclectic combining in a peculiar way elements of the transformational theory, tagmemics, traditional grammar, and whatever approach had found suitable for the author's purposes, which were straightforwardly practical. Perhaps the most characteristic feature of this way of doing contrastive analysis is that the descriptions of the languages under consideration were considered as "given", which means that the contrastivist was simply making use of the available grammars, each of them having been arrived at independently, on the basis of the data taken from only one language at a time [1].

Contrastive analysis so conceived may be called a difference oriented practical comparison, where the main objective is to find the differences in structure between two languages that may underlie possible transfer errors.

One can imagine another type of grammatical comparison, which we shall call theoretical. Broadly speaking, there are two ways in which it can be conducted.

As in practically oriented contrastive analysis, two or more possibly adequate grammars, constructed independently from each other, may be subjected to comparison. The aim of this operation, however, is purely linguistic. It may be (on the synchronic level), either the search for universals, the interesting example of which would be an attempt to verify the universal base hypothesis, or the attempt to develop language typology. In the first case we would have to do with the similarity oriented comparison, in the second with the difference oriented one.

Such a comparison to be of any value, has to presuppose the existence of the grammars that are at least descriptively adequate on

[1] Naturally, when the less known languages were investigated the contrastivist himself had to perform the work of the descriptive grammarian and to fill up the "blank spaces" in the descriptions he had at his disposal. It might also be that he will have to "translate" the existing descriptions into the language of the general theory he had chosen. Nonetheless, he would treat the comparison as something one gets to once the grammatical analysis proper had been finished.

a fairly large scale. Unfortunately, this is not the case even for the much studied languages such as English and Polish. Therefore, it seems that the second type of theoretical comparison, that can actually be used to facilitate the construction of such grammars is much more interesting, at least presently.

Suppose that we have a sentence A in language L, for which, on the basis of some heuristic principle such as the one given by Katz and Postal, 1964 some deep structure X has been postulated. Unhappily, the evidence that we can find in L_1, and which may constitute the syntactic justification of X, is really scanty. Suppose also that there is another language L_2 in which there is a sentence A" that is equivalent to A in L_1, in the sense it is semantically identical to it, not by the virtue of the synonymous expressions but due to the identity of semantemes (meanings of lexical morphemes) out of which the sentences are constructed and, which is important, due to the identity of the semantically relevant fundamental syntactic relations.

In such a case the relation holding between A and A" resembles that of a simple paraphrase. We have then the right to suppose that the deep structures underlying A and A" are practically identical. Such a statement needs, quite naturally, further qualifications. The deep--structure-identity-of-equivalent-expressions claim would receive the principled theoretical basis had we adopted the generative semantics hypothesis [2]. It seems, however, that it would be almost equally reasonable within the standard theory. Especially, it appears to fit the early Postal-Lakoff conception [3] of the deep syntactic structure where the so called "grammatical words" are treated as the transformationally created particles rather than the deep constituents. Thus it becomes possible to distinguish quite clearly this part of the deep structure which is relevant for the semantic interpretation, namely, the phrase marker tree configurations determining syntactic relations and the semantic specification of the inserted lexical items, from this part of the deep structure which is not, for example the order of elements and the semantically empty markers specifying the obligatory character of certain segment transformations etc. Of course, when we postulate the identity of structures underlying A and A" we mean the identity of their semantically important aspects.

Imagine now that there are some surface syntactic facts in L_1 which could not have been accounted for if we had not postulated X as the

[2] On the formal nature of the "identity" of semantic representation of synonymous expressions see McCawley 1968, 1970 Chomsky 1968.

[3] See Lakoff 1965, Postal 1966.

structure underlying A". We are entitled now to regard the existence of such facts in L_2 as an additional argument for our earlier hypothesis that X underlies A in L_1.

An example of this way of reasoning may be found, for instance, in Ross's paper "On Declarative Sentences" where the evidence from Arabic and Thai is called for in support of the hypothesis that all declarative sentences in English are embedded in the superordinate performative clause. It has been observed that in Arabic the word *?inna*, which is otherwise used as the complementizer following the verb of saying *?aquulu*, may appear optionally at the beginning of all declarative sentences. As Ross puts it "even if no other evidence were available in Arabic one would be tempted to propose the analysis along the general lines of performative analysis to account for them (those facts)" [4] When this sufficient argument is extrapolated into English the performative analysis finds strong additional motivation.

Similarly, when the hypothesis was advanced that verbs and adjectives belong to the same deep category in English, the copula being introduced by the transformation whenever adjectives appear predicatively, the well known facts from languages like Russian and Hebrew where copula is not present in this position at all, were called for in support of this claim.

When we accept the universal base hypothesis, the consideration of such issues would naturally have the character of a general theoretical inquiry.

Now I would like to show how the evidence found in the examination of Polish equivalents of English sentence adverbs supports some specific claims as to the structural description of English sentences containing this category. Those few examples to be discussed here shall provide a sample of a contrastive analysis which is based on what we have called "theoretical comparison".

Sentence adverbs are words like: *obviously, fortunately, wisely, frankly* in sentences

1) Obviously, he wants it.
2) Fortunately for us, she broke her leg.
3) Wisely, she left him.
4) Frankly, she did not deserve it.

All of them stand in some syntactic relation to the rest of the surface sentence. Semantically, they express an evaluation of what is being said. The evaluation may be of several kinds. It may be concerned with 1) the content of the communication 2) the manner in which this content

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[4] Ross, J. 1970, p. 245.

has been communicated. In the first case we have to do with attitudinal adverbs like *fortunately, wisely, probably*, in the second one we are dealing with the stylistic adverbs like *frankly, seriously, confidentially* etc. This distinction and the terminology is taken from Greenbaum 1968.

Attitudinal adverbs may be further subdivided into two groups. 1) Modals like *certainly, possibly, apparently, obviously* etc. which "assign a degree of likelihood (a probably truth value) to the associated predication"[5]. b) Evaluative adverbs which "pressupose the positive truth value of the surface predication with which they are in construction and offer an evaluation (judgement value) of what is being said" [6] Examples are *interestingly, luckily, foolishly*.

The distinction between modal and evaluative adverbs corresponds to parallel one made in Kiparsky and Kiparsky 1970 between non-factive and factive predicates.

The judgement expressed by evaluative adverbs may be concerned with the "consequence" of the fact described by the predication to some person who may be the speaker himself, agent of the action performed or some other specified or unspecified human being. The "consequence" may be connected with the fact that a) what is being said is fortunate or unfortunate to somebody: *tragically, fortunately, happily, sadly* b) that it causes some satisfaction or discomfort to some person: *annoyingly, comfortingly, disturbingly*. c) that the content of the communication is in some measure strange or unexpected to somebody, *puzzlingly, incredibly, curiously, surprisingly* etc.

The judgement may be also concerned with the moral or the pragmatic evaluation of the event or the person involved in it: *cleverly, correctly, rightly, reasonably, artfully, wisely* etc.

Adverbs expressing the two kinds of judgement distinguished here will be called adverbs A and B respectively [7].

Notice that sentence adverbs in sentences 1-4 belong to different semantic classes. It will be claimed that those differences have their reflection in the deeep syntactic analysis of those sentences. In other words, it will be asserted that the surface structure of the type "Adj+ly+S" is multiply ambiguous being the neutralization of at least four different deep structures.

I shall propose that the sentences 1-4 are transformationally related to the structures underlying the sentences 4 - 8, which are shown on the diagrams (1), (2), (3) and (4) respectively [8].

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[5] Schreiber 1971 p. 88.

[6] Op. cit. p. 88.

[7] The latter are sometimes called epithet adverbs.

[8] Strictly speaking, these are not the very deep structures, which are most

4') That he wants it is obvious to me.
5) She broke her leg and it was fortunate for us that she did it.
6) She left him and it was wise of her that she did it.
7) If I may say frankly, I would say that she did not deserve it.

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probably much more abstract formal objects, but some sort of intermediate ones simplified for the sake of clarity of presentation. After all, for the purpose of contrastive analysis we need not go deeper than it is necessary to assure a common basis for comparison.

As to (2) and (3) I have followed Schreiber 1971. The rationale behind his analysis, although he does not make it explicit, is to make the focus phrase of a sentence the topmost predicate in the underlying structure. Thus the special character of sentence adverbs as parenthetical constructions with an independent intonation center and thus also what follows after it an independent focus, (For the discussion of the relation between focus and intonation see Chomsky 1968) has been accounted for.

It seems, however that such an approach involves considerable difficulties. It is impossible to derive adverbs of modality from the structure underlying conjunctions like "He broke his leg and it was probable that he did it". To treat them differently from the evaluative averbs would be inadequate since they seem to display the identical focus-presupposition structure as other sentence adverbs. In (1) we are dealing with the two independent foci "obviously" and "broke his leg" (or some subpart of the VP) whereas in (5) (with the normal intonation) the focus is "obvious" and the VP of the embedded sentence is a part of the presupposition which is something like "That S is true to some degree" in some way.

It should be clear that it is not the case, as Schreiber suggests, that the analysis of the evaluative adverbs constructions as conjunctions explains their factive character as opposed to the non-factive character of modal adverbs. It seems that such an explanation, apart from other reservations, would be needlessly redundant since the factive or non-factive character of adverbs follows from the factive or non-factive character of their adjectival roots and it has to be accounted for on the level "That S is Adj" structures, most probably along the lines of Kiparsky and Kiparsky 1970.

The possible way out of this DILEMMA would be either not to bother with the focus-presupposition at the level of deep structure at all, leaving it to the surface interpretation rules (as it is done in Chomsky 1968), or to account for them in some other way, perhaps along the lines of Lakoff 1969 where deep structure is presented as an n-tuple (DS, F, PR, T...) F=focus, PR=the set of presuppositions. (Apparently, he has in mind another type of presuppositions. For the discussion of his views see Chomsky 1972).

In both cases (2) and (3) are wrong. Still another possibility would be to derive modal adverbs from some other source, perhaps from the obligatory modal frame elements. They may be presented either as a set of modality markers or some "performative" superordinate modal clause "I suppose", "I am certain", "I think it obvious" with the subsequent establishment of some general principles concerning modal frame and pertaining to the focus-presupposition relations. In this case (1) is obviously wrong.

Further discussion of such cases, however interesting, would lead us beyond the scope of the present paper.

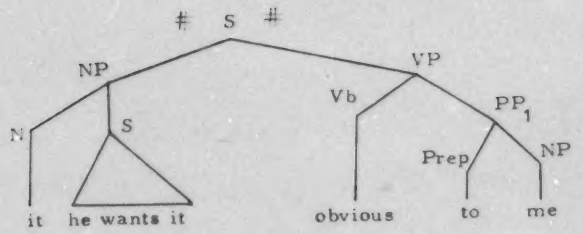

Diagram (1)

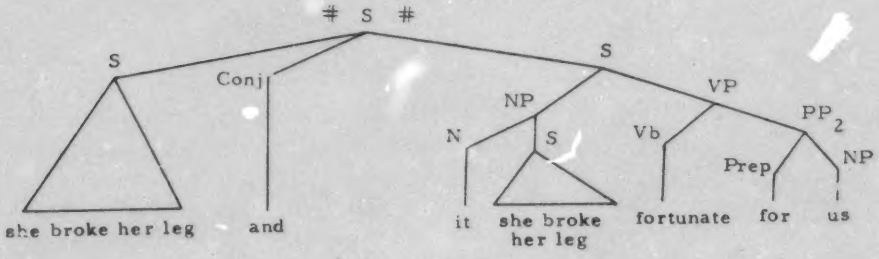

Diagram (2)

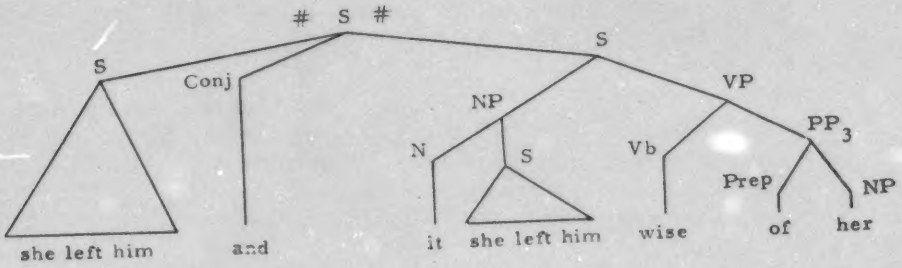

Diagram (3)

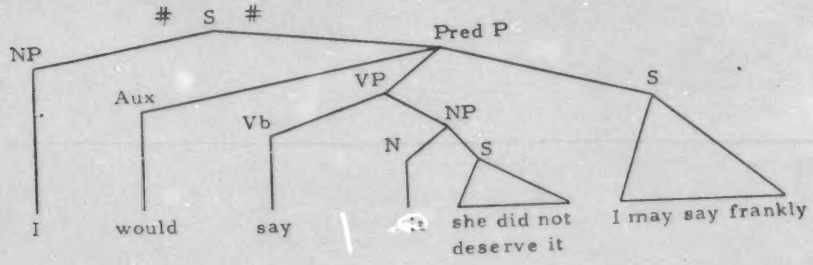

Diagram (4)

Let us concentrate now on the three specific claims which are implicitely present in this analysis.

Modal and evaluative adverbs are derivationally related to adjectives predicating sentences embedded in the subject noun phrase of the complex sentence.

An apparent alternative would be to introduce sentence adverbs as separate deep structure categories forming a pre-sentence unit as it has been actually suggested in Chomsky (1965, 102) We may thus think about the phrase structure rules like 8) or 9)

8) $\Sigma \rightarrow \text{Adv} \frown \text{S}$

9) $\text{S} \rightarrow \text{Adv} \frown \text{NP} \frown \text{Aux} \frown \text{VP}$ (Chomsky 1965, 72)

In fact, such a proposal would seem favourable on some other grounds, namely, it would seem more compatible with the lexicalist hypothesis which has recently been generalized from derived nominals to some classes of adverbs (Bowers 1968).

How are we to decide which analysis is correct? What kind of arguments can we present in the defence of the transformational hypothesis as applied to sentence adverbs? In other words, what kind of facts except the cognitive synonymity of 1 - 4) and 5 - 8), otherwise unexplained, can be accounted for within the adopted approach. It appears that there are not many of them. The following evidence is mentioned in Schreiber (1971).

It is alleged that the analysis simplifies the grammar since the constraints of the formation of sentence adverbs follow from the constraints on the class of adjectives that may appear in (1). The ungrammaticality of 10) and 11) may be explained on the common basis. This purports to account for our intuitions concerning these facts.

10) Easily, she thought about it.

11) That she thought about it was easy.

Unfortunately, the validity of the argumentation as to the identity of deep structures based on the identity of the selectional restrictions has been recently subjected to serious criticism. It is not clear whether se-

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* Prepositional phrases in (1 - 3) are provided with subscripts to indicate their different functional status. They should be marked as such (in whatever way it is permitted by the theory) since they represent different co-occurance potentials

To break her leg was wise to her
fortunate for her
obvious for me.

and are in a clearly different semantic relation to the adjective they modify. In a case grammar they would probably be assigned distinct roles. It is also probable

lectional restrictions are syntactic or purely semantic phenomenon [10]. It should be also remembered also that the relevent generalizations can be equally well captured within the lexicalist approach where the selectional restrictions are presented as the relations holding between the categorically unspecified roots in the head — modifier constructions [11].

Another fact that the adopted analysis purports to explain is that, as noted for the first time by Katz and Postal, attitudinal sentence adverbs do not appear in imperatives. Their non-occurance follow directly from the total impossibility of the proper underlying structure since in imperatives the deep subject is the second person pronoun, whereas in the proposed derivation it is an embedded sentence.

Surely, the lexicalists would have their own way to explain this restriction. They may, for example, postulate the rule which would rewrite (Spec, S) into the mutually exclusive categories Adv and IMP.

The most persuasive argument, as it seems to me, for the transformational derivation of sentence adverbs comes from the evidence that can be found examining the similar syntactic phenomenon in Polish. We have the right to assume that there is in Polish the deep structure identical (identical with proper reservations, of course such as those discussed earlier) to (1), (2), (3) which underlies sentences like (12), (13), (14).

12) To, że on to chce jest oczywiste dla mnie.
13) Ona złamała nogę i to, że ona to zrobiła jest dobre dla niej.
14) Ona go opuściła i to, że ona go opuściła było mądre z jej strony.

We have also in Polish sentences like (15 - 17)

15) Oczywiście, (że) on to chce.
16) Dobrze, że ona złamała nogę.
17) Mądrze, że ona go opuściła.

(15 - 17) show that the adverbialization T-rule, if it exists, operates in Polish as well. Those sentences differ from their English counterparts in that the word "że" appears between adverbs and the rest of the sentence. This Polish "że" is a clause complementizer. Thus there seems to be no

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that the functional difference could be presented not in terms of labels but in terms of tree configurations. This would be concerned with the possibility of some deep transformational relationship between (1 - 3) and some other types of structure. Such a possibility will be discussed briefly in the latter part of this paper.

[10] See especially McCawley 1968.

[11] See Chomsky 1967. From this point of view the rule 8 (is preferable to 9) since it explicitly states the fact that sentence adverbs modify the whole sentence. In Chomsky's terms the rule should probably be refermulated as S→(Spec S) S when (Spes S)= Adv_s.

other way to account for its appearance in (15 - 17) than to admit that the sequence of words which follows after it is a constituent dominated by NP node-a nominal [12].

The only way for the lexicalists to account for (15 - 17) would be to formulate the highly improbable, artificial and surely ad hoc base rule

$$S \rightarrow Adv \frown NP$$

On the other hand the transformational approach offers a simple explanation here (15 - 17) like their English counterparts are derived from something like (1), (2), (3) respectively, the only difference being that in Polish complementizer deletion is optional after adverbialization (with some lexical items it is in fact either obligatory or does not apply at all) whereas in English it is always obligator.

In view of what we said earlier about the deep structure identity principle we have the right to say that the appearence of (15 - 17) testifies on the behalf of our earlier analysis of English sentences (1 - 3).

Another claim presupposed by (1), (2), (3), is that prepositional phrases in (5 - 7) have different syntactic functions depending on the kind of stem adjectives of sentence adverbs. One may say also, quite tentatively, that the function of PP following the stem adjective of the modal adverbs resembles that of subject of certain sentences and the function of PP following the stem adjective of the subgroup A of evaluative adverbs resembles that of a direct object of certain constructions. What syntactic evidence may be found in English to support this claim? That the three PPs are different in some way is clearly seen when we examine the prepositions which are either "to", "for" or "of" for each kind of adjective respectively. Let us examine the sentences containing adjectives which form the stems of those evaluative adverbs which have verbal roots. They seem to be transformationally related to the active sentences like (19).

18) That she broke her leg is puzzling for me.
amusing
interesting
comforting

19) That she broke her leg puzzles me.
amuses
interests
comforts

Similiarly we may relate sentences with modal deverbal adjectives to sentences like (21)

[12] For the empirical statement that "that" complementizers are always connected with the sentences embedded in NP see Rosenbaum 1965.

20) That he wants it is obvious to me.
21) I think that it is obvious that he wants it.

Notice that what is a prepositional phrase object in 18) is the direct object of 19) but the prepositional phrase object of 20) is the subject of 21). The prepositional phrase "to me" in 20) is roughly equivalent to "in my opinion". The following expressions are tautological.

22) ?In my opinion it is obvious to me that he wants it.
23) ?I think that it is obvious to me that he wants it.

One has to admit that the evidence is not altogether compelling. What is, for example, the situation with adjectival adverbs like *strangely, funnily, curiously,* etc which cannot be paraphrased in the same way as *disturbingly* or *annoyingly*?

The at least partial answer to this question can be found in the examination of the Polish data. Consider the following triple

24) To, że on ją bije jest śmieszne dla mnie.
smutne
dziwne
ciekawe
25) To, że on ją bije śmieszy mnie.
smuci
dziwi
ciekawi
26) Jestem rozśmieszony tym, że on ją bije.
zasmucony
zdziwiony
zaciekawiony

Only the first element of this triple is directly translatable into English. We do not have causative verbs like

to funny
to sadden
to strangen
to curious [13]

In Polish, on the other hand, almost every adjective may be verbalized by the addition of the proper prefix or suffix. If the adjective is of the kind which is used to form A-type evaluative adverbs, it becomes a tran-

[13] There are undoubtedly near synonymous verbs like "to start", "to surprise", "to interest", etc. These, however, are separate lexical items and cannot possibly be transformationally related to the adjectives "curious", "strange". Non-lexical transformations may add some derivational morphemes but do not replace one lexical item by another since in such a case they would loose their general character.

sitive verb that may appear in sentences like (25). Its direct object is a NP that appears normally as an object of a prepositional phrase complement of an unverbalized adjective. This seems to support our claim that the function of this PP complement does have something to do with the function of the direct object no matter whether the adjective in question is deverbal or not.

Suppose that we actually wanted to derive constructions like (5), (24) from the structures with transitive verbs and sentencial complements as subjects. We would almost certainly have to make use of abstract words, the device which is found to be unsatisfactory by many grammarians [14] but can be to certain extent justified if the words in question really exist in some other language, in this case Polish. Notice, that it would not help to apply the inchoative-causative analysis along the lines of Lakoff-McCawley (1965, 1969). We may relate (27) to (28) but (29) is obviously different from (30) because of the lack of the adjectival expressions in English corresponding to Polish *rozśmieszony, zdziwiony, zaciekawiony,* and related morphologically to *funny, strange, curious.*

27) That S is sad for me.
28) That S CAUSES that I BECOME sad.
29) That S is funny for me
strange
curious
30) That S CAUSES that I BECOME funny
strange
curious

The last problem that I would like to mention here is connected with our hypothesis as to the deep structure of sentences with stylistic adverbs. According to our analysis, stylistic adverbs are manner adjunct to the verb of saying in the subordinate part of the complex performative clause. We shall claim now that (4) underlies also the constructions like (31), (32).

31) Frankly speaking, she did not deserve it.
32) In all confidence, she did not deserve it.

All of them seem to be synonymous to (8) which I will repeat here for convenience.

33) If I may speak frankly, I would say that she did not deserve it.
confidentially

Consider, however the sentence (34)

[14] See, for example, Chomsky 1967.

34) I am speaking frankly when I am saying that she did not deserve it.

It seems to me that we are dealing here with the case in which our intuitions are rather unclear. Is 31) synonymous to 33) or 34)? Is it ambiguous? What exactly is the difference in meaning between 33) 34)? The explicit answer to all those questions would be crucial if we were to determine the deep structure of 31) and 49) merely on the basis of semantic criteria. In fact, I can find no hint whatsoever in the surface syntactic structure of English sentences which would suggest the choice of the adequate analysis from the two alternatives available.

Again, the analysis of Polish data supports us with the hint which is at the same time a strong syntactic argument justifying the choice we have already made. Consider the particle "to" which appears optionally between the participial adverbial phrase and the rest of the sentence in 35 - 37)

35) Szczerze mówiąc, (to) ona na to nie zasłużyła.
36) W zaufaniu, (to) ona na to nie zasłużyła.
37) Poważnie, (to) ona na to nie zasłużyła.

In Polish "to" is used to signal the beginning of the superordinate part of the sentence with the preposed conditional or adverbial clause,

38) Jeśli mam mówić szczerze, to powiem, że ona na to nie zasłużyła.

We were right then when we proposed initially that it is (4) and not something like the structure underlying 34) that is the deep strucure of 4), 31). There is no other way to account for the appearance of "to" in Polish sentences which are equivalent and almost congruent to 4) 31) than by postulating that in their deep structure, which means in the deep structure of their English equivalents too, there is some conditional clause [15].

What conclusions can be drawn from the three examples discussed here which may be relevant to the practical methodology of contrastive studies? It has been pointed out that the results of the comparison of two language systems may have a direct relevance to the synchronic descriptive analysis of those languages. One may think thus about two types of contrastive analysis.

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[15] In fact, there are quite a number of unsolved (at least as it seems to me) problems connected with the analysis of "to" in Polish. What is the source of "to" in the expressions like "Janek to osioł" where it seems to function as a copula? It may also appear between modal adverbs and the rest of the sentence as in "Prawdopodobnie, to Janek już tu nie wróci".

1) Theoretical, concerned with what we have called "theoretical comparison", which can be defined as the analysis "undertaken in order to shed light on a particular theoretical (grammatical) issue by gathering relevant data within the contrastive framework" [16] Such an analysis would have to be based on the fully explicit theory of language such as the TG theory. Any shortcuts and simplifications would be principally excluded here.

2) Practical, accepting without reservation language descriptions offerred by the grammarians, that would limit itself to what we have described as "practical comparison".

The first type of contrastive analysis would be within the realm of the linguistic inquiry proper whereas the second one would be in the domain of psycholinguistics and language teaching methodology [17].

There are good reasons, however, not to make such a scrupulous distinction and try to combine in some way those two seemingly different approaches. Such a solution would eliminate the redundancy which follows from the fact that the grammatical systems are compared twice on the two independent levels of analysis. Secondly, grammatical research would certainly profit since the linguistically relevant comparison would be conducted systematically on a large scale receiving an additional impetus from the possible practical application of its results which motivates the generous supporters of the various "contrastive projects".

It could be therefore proposed that the work on the contrastive project should consist of two stages.

A) The "theoretical comparison" of the structures of two languages undertaken with the possibility of changes in the already available descriptions in view. The ultimate output of the analysis on this stage would be perhaps some sort of the formalized transfer grammar, along the lines of Harris 1954.

B) The psycholinguistic and pedagogical analysis of the results of the first stage work. Here the output would be the set of trasfer predictions with the accompanying recomendations as to the possible ways of curing the negative effects of the interference. The points of the greatest difficulty in learning of one of the compared languages by the speakers of another can be predicted what in turn may lead to the suggestions as to the way of presentation of teaching materials.

The final results of the work within the project can be naturally

[16] Selinker 1971, 1. In his paper he makes some interesting observations on the relation of contrastive linguistics to linguistic theory i.e. on the "theoretical" contrastive analysis.

[17] A similiar distinction is implied in Zabrocki, L. 1971 when he writes about the "pure" and "applied" CA.

presented in the form suitable for the teacher and the student with the minimum appeal to technical jargon etc. [18]

Among the contrastive projects in progress with the published or semi-published materials of which I had the opportunity to get acquainted with the closest to the one outlined here seems to be the PROJECT OF APPLIED CONTRASTIVE LINGUISTICS being done in Kiel.

According to its chief researcher Gerhard Nickel, its central objective is a threefold one.

"(1) to uncover and formalize some of the underlying properties of natural languages, especially English and German;

(2) to contribute towards contrastive analysis of English and German on all structural levels;

(3) to provide new teaching materials for textbooks and types" [19].

Clearly, both the linguistic theory and language teaching methodology are aimed to profit from the result of such a work.

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[18] The idea stressed by some contrastivists that the understandability for the teacher should be one of the fundamental principles guiding the investigator (even to the extent that it determines the choice of the linguistic theory) seems to be somewhat mistaken. One does not impose the constraint on the medical scientist or biochemist that they should write down the results of their research in the language understandable to the prospective patient or family doctor.

[19] PAKS Arbeitsbericht 1968 — Preface.

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SOME DIFFERENCES BETWEEN ENGLISH AND POLISH ON THE LEVEL OF THE BASIC SENTENCE PATTERN

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The comparison of English and Polish basic sentence patterns shows that the differences on this level concern three types of phenomena:

1. Some B.S.P. (basic sentence patterns) occur only in English, with no corresponding B.S.P. in Polish for the same type of predicator.
2. Some B.S.P. occur only in Polish, with no corresponding B.S.P. in English for the same type of predicator.
3. For the same type of predicator two different B.S.P. occur in English and Polish,

where by the term basic sentence pattern we mean a linear organization of abstract objects which represent the surface structure syntactic functions of the lexical items occurring in the deep structure repeated within the same pattern.

In this paper we discuss an example of a B.S.P. which appears only in English and never in Polish.

The following sentence pattern, common in English does not occur in Polish.

S.P. 1	Subject	— Verb	— Object	— Verbal Complement
	NP_1	V_1	NP_2	Comp+V_2

Sentences 1 - 4 follow this pattern:

1. I want him to sing.
2. Mary heard her uncle sing.
3. She believed him to win.
4. I prefer for John to sing.

The different realizations of Comp (complementizer) are irrelevant here.

These four sentences above share certain features as far as the structures underlying them are concerned:

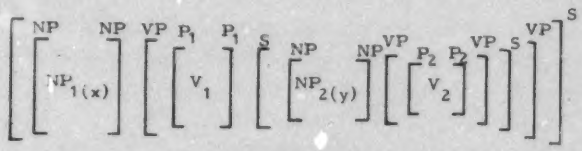
a. The main verb is a two place predicate ($Pred^{II} = V_1$)
b. V_1 takes as its arguments a noun phrase and a sentence
c. The subject of the sentence which functions as the second argument

of V_1 is correferential with the other argument of V_1. Hence the logico-semantic representation common for sentences 1 - 4 is something like this:

$$\left[V_1^{II} ;\ NP_{1(x)},\quad \left[V_2^{I} ;\ NP_{2(y)} \right] \right]$$

d. It is NP_1 (and not S) that is chosen by an appropriate rule of subjectivization to function as the surface structure subject in 1 - 4. Thus the deep syntactic structure that we assume for these sentences is D.S. 1:

D. S. 1.



Polish sentences corresponding to 1 - 4 are 5 - 8:

5. Ja chcę, żeby on śpiewał.
6. Mary słyszała, że (jak) jej wujek śpiewał.
7. Ona wierzyła, że on zwycięży.
8. Ja wolę, żeby Janek śpiewał.

These sentences have the same logico-semantic structure as their English counterparts and the same deep syntactic structure. The Polish sentence pattern derived from D.S. 1 is different, however, from the English S.P. 1:

S.P. 2	$Subject_1$ —	$Verb_1$ —	Comp —	$Subject_2$ —	$Verb_2$
	NP_1	V_1	Comp	NP_2	V_2

The main difference between S.P. 1 and S.P. 2 is that S.P. 2 is not a basic sentence pattern according to our definition because the syntactic functions of subject and verb are repeated twice. We would rather say that S.P. 2 includes another sentence pattern — Subject — Verb which is a basic sentence pattern [1].

Our objective here is to examine why the subject — verb relation of NP_2 and V_2 which exists in the deep structure no longer exists in the English surface structure and why must this relation be retained in Polish. In other words we shall deal with the problem of shifting NP_2 in the derivation of the English sentences from the domination of the lower S

[1] S.P.2 occurs in English too. The point is that in Polish for the deep structure D.S.1 there is no other surface structure but S.P.2 possible whereas in English it can be either S.P.1 or S.P.2, according to the verb (many verbs can occur in both with no change of meaning).

under the domination of VP of the higher S. We shall call the transformation responsible for this shifting *the sentence brackets erasure transformation.*

In order to establish the conditions under which this transformation applies to D.S. 1 let us consider the derivation of S.P. 1 in some detail. For clarity of presentation we repeat D.S. 1 in the form of a tree diagram (Diagram 1):

We assume that the first transformation that applies to this structure is the above mentioned sentence brackets erasure transformation, abbreviated here S.B.E. tr. This transformation erases the sentence brackets within the VP bracket and all inner brackets within this sentence. In terms of node domination this transformation liquidates the lower S node together with all nodes dominated by this node. The result of this operation is shown in the diagram below (Diagram 2):

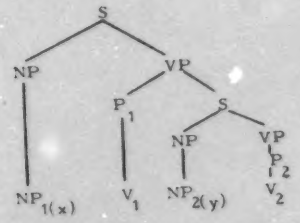


Diagram 1

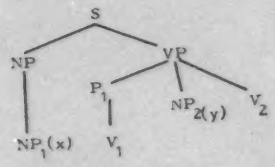


Diagram 2

One obvious condition of the application of this transformation is the occurrence of S under the VP node. This is, however, by no means sufficient because there are deep structures in English similar to D.S. 1 (with S immediately dominated by VP) for which this transformation is not permitted. For instance sentence 9 is unacceptable:

9. I said (for) him to come here.

The only possibility here is 10:

10. I said that he came here.

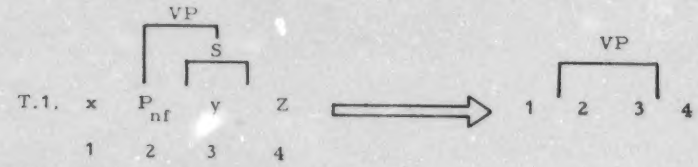
Similarly, only 11 is acceptable, but not 12:

11. I resent that Mary has been the one who did it.
12. I resent Mary to have been the one who did it.

This leads us to the conclusion that not all verbs allow the S.B.E. tr. Verbs that allow this transformation to apply to D.S. 1 are the so-called non-factive verbs. *Say* and *resent* in the examples above are factive verbs for which the surface structure like S.P. 1 is not permissible.

Taking this important distinction into consideration we formulate the

sentence brackets erasure transformation for English in the following way:



P_{nf} = non-factive predicates [2]

Due to this transformation every element that was previously dominated by the S node is now dominated immediately by the VP node (see diagram 2).

To the structure presented in diagram 2 *the complementizer 1 introduction transformation* applies. This transformation needs the following structural index: two verbs (one of which may be a copula) must be dominated by the same VP node. The effect of this operation (diagram 3) is that the complementizer congruent with the fact that the erasure of sentence brackets took place, i.e. COMP 1, is introduced in front of the second verb.

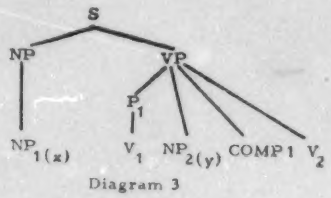
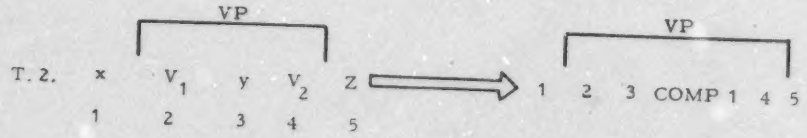


Diagram 3

The introduction of COMP 2 is automatically excluded (COMP 2 is transformationally introduced whenever the S.B.E. tr. does not apply, e.g. in the examples 10 and 11).

The transformation introducing COMP 1 is formalized in the following way:



Further transformations do not interest us here because these are sufficient to achieve the sentence pattern level.

[2] In the structural description of the transformations presented in this paper the emphasis is not only on the relevant elements but also on the relevant node domination. This particular transformation does nothing else to the elements of the structural description but change the node that immediately dominates element 3.

Shifting now to Polish — if we consider example 5:

5. Ja chcę, żeby on śpiewał.

we can easily state that although the conditions necessary for the application of the S.B.E. tr. in English are met, this transformation can not apply to D.S. 1 to produce a grammatical Polish sentence. Sentences like 13 and 13 are not acceptable:

13. *Ja chcę jego tańczyć.
14. *Ona wierzyła jego zwyciężyć.

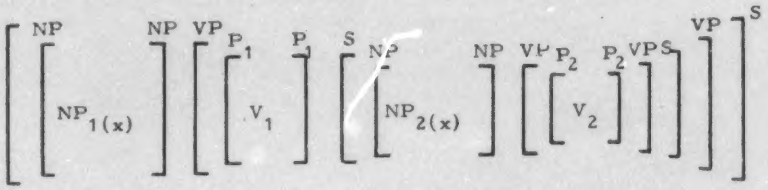
This could mean two things: 1. either the S.B.E. tr. does not exist in Polish at all, or 2. it exists but it works under different conditions than in English.

The first assumption can be immediately rejected if we take the following Polish sentences into consideration:

15. Ja chcę tańczyć. (I want to dance)
16. On lubi czytać. (He likes to read)

It is obvious that transformations leading to structures like 15 and 16 must include the S.B.E. tr. Notice, however, that the deep structure underlying these sentences in not D.S. 1 but D.S. 2 in which NP_1 is correferential with NP_2[3]:

D. S. 2.



The correferentiality of NP_1 and NP_2 is not still the sufficient condition for the S.B.E. tr. If it were, the following sentence would have to be acceptable:

17. *Ja wierzę umrzeć.

Although $NP_1 = NP_2$ only the surface structure without the sentence brackets erasure transformation is acceptable:

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[3] I took it for granted that sentences like:

I want to dance.

have an embedded sentence of the form *I dance* in their underlying structure. This is a common assumption among the transformational grammarians.

During the discussion of this paper one of the participants of the conferrence raised the problem of the syntactic evidence of the occurrence of the second NP correferential with the first NP in the deep structure. This evidence is given for instance in Robin Lakoff (1968 : 30) who gives the examples from Latin and English.

18. Ja wierzę, że (ja) umrę. (I believe that I shall die)

Our conclusion is that the deletion of NP_2 (if $NP_2 = NP_1$) is the condition sine qua non for the application of the S.B.E. tr. in Polish. Whenever the verb (factive or not) does not allow the second correferential NP to be deleted [4], e.g. wierzyć (believe) in 17, this transformation is not possible in Polish.

Not so in English. For these verbs which do not allow the deletion of NP_2 (but are non-factive verbs) the S.B.E tr. is not blocked. Compare for instance 19 and 20:

19. He fancies to be an expert.
20. He fancies himself to be an expert.

The Polish structural counterpart of 20 is not acceptable:

21. *On wyobraża sobie być ekspertem.

Summing up these considerations we state that in Polish the S.B.E. tr. must be preceded by *the identity erasure transformation*. The latter applies whenever the verb (V_1) occurring in the deep strucure of the type D.S. 2 allows the deletion of NP_2. The identity erasure transformation:

In Polish, like in Latin the gender agreement in the sentence

Julia woli być posłuszna. (Julia prefers to be obedient) but not

*Julia woli być { posłuszny / posłuszne }

points out to the fact that the noun Julia must function as the subject of the embedded sentence at some phase of the derivation of this sentence.

The evidence from English is exemplified in Lakoff by the following pair of sentences:

Mary likes to talk to herself.

*Mary likes to talk to himself.

[4] Apart from the distinction between factive and non-factive, verbs taking a sentential complement belong to one of the following subclasses:

a. verbs that must have the subject of the lower sentence identical with the subject of the higher sentence. The second NP must be deleted, e.g.

I tried to dance.

*I tried (for) you to dance. *I tried { me / myself } to dance.

b. verbs that may have either $NP_1 = NP_2$ or $NP_1 \neq NP_2$. If $NP_1 = NP_2$—NP_2 must be deleted, e.g.

I love to play piano. I love Bill to play piano.

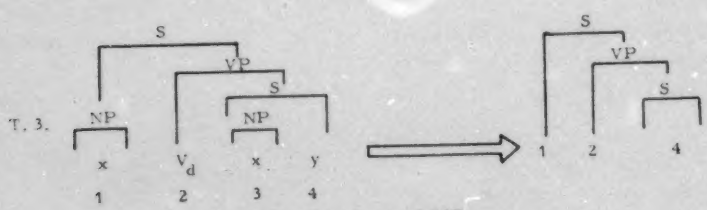
*I love { myself / me } to play piano.

c. verbs that may have either $NP_1 = NP_2$ or $NP_1 \neq NP_2$. In neither case NP_2 can be deleted:

John fancies Jane to be an expert.

John fancies himself to be an expert.

*John fancies to be an expert.



where V_d=a verb allowing the deletion of NP_2

We assume here that this transformation can function across the sentence boundaries in a configuration like this one [5].

If we compare this transformation with Rosenbaum's formulation (Rosenbaum, 1967:6) we can see that from the three conditions governing the application of this rule two are expressed here in the rule itself in terms of the node domination. These are the following conditions:

1. NP_j (our NP_2) is dominated by $S\alpha$
2. NP_i (our NP_1) neither dominates nor is dominated by $S\alpha$

The third condition, namely the minimal distance principle is not taken into account here because in the form as stated by Rosenbaum it can be easily invalidated by sentences which are counter examples to it [6]. As this is not our primary concern we do not attempt to replace it with anything else here.

After the application of T3 to the deep structure D.S.2 (diagram 4) we get the phrase marker presented in diagram 5:

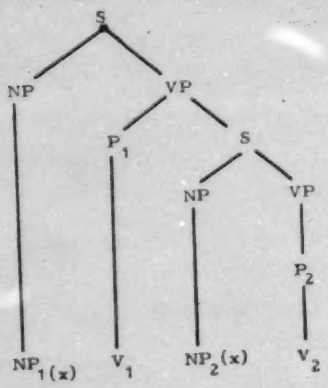


Diagram 4 (D.S.2)

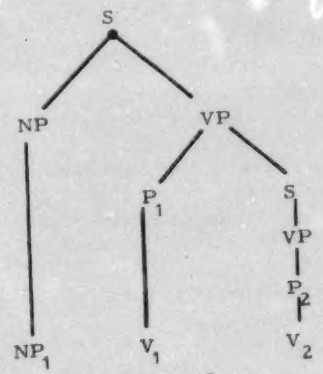


Diagram 5

Only to this structure (diagram 5) the S.B.E. tr. can apply in Polish.

[5] We assume that the identity erasure tr. can function across the sentence boundaries. The fact that operations on correferential noun phrases can work across sentence boundaries is reflected for instance in anaphoric processes. Compare also Grinder's supper-equi-NP-deletion (Grinder, 1970)

[6] cf. Grosu, A. 1971.

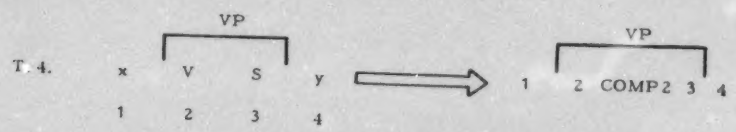
Notice incidentally that in this case the S.B.E. tr. agrees with Ross's principle of tree-prunning (see note 7).

Getting back to the Polish sentence with which we have started this discussion:

5. Ja chcę, żeby on śpiewał

we are now in a position to say that the S.B.E. tr. cannot apply here because the identity erasure transformation is not possible and that is why the deep structure D.S.1 is never realized in Polish as S.P.1.

To these structures for which S.B.E. tr. is blocked the complementizer 2 introduction transformation applies obligatorily. This operation introduces COMP 2 under the VP node in front of the embedded S:



The order of these transformations is again important. If the COMP 2 transformation were first the following unacceptable sentence could result:

22. *Ja chcę, żebym ja poszła (I want that I go)

instead of 23:

23. Ja chcę iść (I want to go).

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[7] Ross's rule of tree-prunning is a formal condition of the wellformedness of trees and is independent of the order of transformations. Here the S.B.E. tr. has a fixed position among other transformations; it is the previous application of the identity erasure transformation that conditions the S.B.E. tr. in Polish and not the fact that the S node does not branch andy further at this point.

A CONTRASTIVE ANALYSIS OF LINKING VERBS IN ENGLISH AND GERMAN [1]

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1. INTRODUCTORY REMARKS. The contrastive analysis of two or more languages, or of particular areas of these languages, may obviously be aimed at various linguistic levels. By way of example one might mention three basic levels, namely, the semantic, the syntactis, and the phonological, but it should be clear that numerous others like the paralinguistic or the emotive, etc., could be equally good levels for comparison.

From previous contrastive analyses it is apparent that these levels are interrelated at least in some fields so that in such cases the question automatically arises whether the methods of analysis applied in one area may profitably be transferred to another and whether, in the end, one may formulate a "unified theory" of contrastive analysis [2].

In this paper we shall assume that it is possible to formulate such a "unified theory" and we shall concentrate on the analysis of our data, which in its turn may serve to support and exemplify the hypothesis of a theory of language comparison.

2.1 THE PROBLEM. As our object of study we have chosen the field of linking verbs in English and German [3]. As is well-known, and has already been observed by Biese (1932), English exhibits an extraordinarily complex field of linking verbs compared to all other Germanic or Romance languages, and presumably other branches of language as

[1] This article is a revised version of a paper read at the Second Polish Conference on Contrastive Linguistics, Dec. 16 - 18, 1971, in Karpacz, Poland. I would like to express my gratitude to Professor Dr. B. Carstensen, director of the Contrastive Linguistics Project at Mainz University, and my other colleagues for their help during the revision of the paper. In particular I have the pleasure of acknowledging the improvements concerning the text and the examples suggested by Mr. R. L. Atkinson.

[2] My colleague, Ch. Todenhagen, from Mainz University, is working on problems of such a unified theory, and I profited greatly from discussions on this subject with him and other colleagues at Mainz.

[3] Cf. König-Nickel (1970) on some general aspects of English-German verb syntax.

well [4]. This is particularly obvious for those verbs having the meaning 'change, become'; English offers *become, come, fall, get, go, grow, run, turn, wax, wear,* as compared to German *werden,* French *devenir,* Danish *bliver,* etc. Another example of such diversity is supplied by English *remain, keep, continue, stay,* etc., where German seems to offer just *bleiben.*

The question which these phenomena pose and which we shall try to answer is threefold, and may be formulated as follows:

(a) which semantic and syntactic features characterize the English set of verbs
(b) which semantic and syntactic features characterize the German set of verbs
(c) how do the two sets compare

One might further ask what consequences the comparison may have for the teaching of English to German students or vice versa, but this question will only be of marginal importance for the present paper.

We shall not deal with any problem of phonology either since there do not seem to be any difficulties specifically connected with our set of verbs.

Another point concerning the subsequent procedure must be explained. Instead of analysing and describing the two languages in isolation and then comparing them to each other, we shall describe the system of English and demonstrate similarities and dissimilarities with German [5]. We hereby imply that the categories, elements, etc., on the semantic as well as on the syntactic level are valid for both languages, i.e. are adopted from a possibly universal inventory [6]. We cannot deal extensively with this hypothesis here, but it had to be mentioned, since it is only the assumption of such an inventory that explains the absence of a metatheory within which the comparison is carried out.

2.2 THE ANALYSIS. The analysis of the linking verbs in English as presented here is taken from my thesis which deals with the semantic and syntactic phenomena in this area on a wider scale. A detailed justification of the system as given below is to be found in that thesis (Bald 1972).

The major subclasses of linking verbs are listed below, with a suggestion as to their defining semantic component or feature:

[4] Cp. also Liston 1970 : 40 ff.), who mentions this kind of convergence and divergence for English — Serbo-Croatian lexical fields.

[5] Cf. the recommendations by Nemser-Ivir (1969 : 6 ff.).

[6] Cf. Berndt (1971 : 28 ff.) on "language invariant" categories, etc. Berndt himself advocates "deep semantic structures" as the starting point for language comparison. Cp. also Ivir (1970 : 24) Wagner (1970).

(1) (a) BE : empty surface-structural element indicating the basic form of attribution: 'X be Y'

(d) SMELL
(c) LOOK
(b) FEEL
(e) SOUND
(f) TASTE
: relating the basic form of attribution to one of the senses: 'X be Y to a certain sense'

(g) SEEM
(h) APPEAR
: speaker's judgement on the facticity of the basic form of attribution: 'may or may not be true that X be Y'

(i) PROVE : speaker's judgement on the facticity of the basic form of attribution: 'is definitely true that X be Y'

(j) REMAIN : 'X be Y before and after a point t on the time scale'

(k) BECOME : 'X be Y after a point t on the time scale'

Assuming that these semantic characterizations, which have here the form of paraphrases but might also be represented by way of features, are correct, and that at least the central field of linking verbs is covered by them, the question is first whether German realizes the same set of distinctions. Secondly, one has to examine whether there are differences within the various subclasses.

Be is equivalent [7] to *sein* as is illustrated by the following sentences:

(2) (a) The man is my father
(a′) Der Mann ist mein Vater
(b) He was ill
(b′) Er war krank

It will be obiovus that there are various restrictions in English sentences containing *be* that are absent in their German equivalents; compare for instance the use the article in the following pairs:

(3) (a) He was a teacher
(a′) Er war Lehrer
(b′) Er war ein guter Lehrer
(b) He was a good teacher

[7] By *equivalence* we mean an at least partial functional equivalence on the semantic and syntactic levels, which is in part indicated by the possible translations offered in the examples. Only a more detailed description of the two languages could illustrate the exact extent of this equivalence. On the question of translation and equivalence cf. Ivir (1969, 1970); Marton (1968 : 54) gives a very useful definition of *equivalence*.

Such phenomena, which are important for the teacher, can only be dealt with in a more detailed analysis; here it has to suffice to demonstrate the basic syntactic and semantic equivalence of *be* and *sein*.

Feel in its various constructions may be contrasted with several German phrases containing *fühlen:*

(4) (a) She feels happy
(a′) Sie fühlt sich glücklich
(b) He feels at home in London
(b′) Er fühlt sich in London heimisch (zu Hause)
(c) She feels a different person after that experience
(c′) Sie fühlt sich wie ein (als) anderer Mensch nach diesem Erlebnis
(d) The water feels hot
(d′) Das Wasser fühlt sich heiß an

These examples illustrate that *feel* and *fühlen* are semantically equivalent in the constructions listed, exhibiting three differences, however: German always requires the reflexive *sich* (*fühlen, anfühlen*) [8]. Secondly, whenever the complement has the form of an NP, it is preceded by *als* or *wie* in German. As regards the latter construction, it would appear that it comes close to the English construction *feel like*+NP, whereas *als* is equivalent to *feel*+NP, but this semantic-syntactic differentiation will need further investigation. The third point is that in the sentence type (4d) German uses the verb *sich anfühlen*, thus exhibiting an overt structural difference that correlates with the semantic-syntactic one between, e.g. (4a) and (4d). Compare the following sentences, that illustrate this difference:

(5) (a) *She feels happy to me
(b) The water feels hot to me
(c) She is feeling happy
(d) *The water is feeling hot

Look shows the following parallels:

(6) (a) He looks old
(a′) Er sieht alt aus
(b) He looked a fool with his new hair-cut
(b′) Er sah aus wie ein Narr mit seiner neuen Frisur

[8] Poutsma (1914 - 29: II, 1 B, 854 ff.) makes the interesting point that the use of *feel* in linking constructions goes back to a reflexive construction. One would have to check, however, whether this is to be taken as a synchronic or diachronic statement on surface or underlying structure, since the *OED* lists quite early examples with *feel* in a linking construction without reflexive.

Look and *aussehen* may be opposed in this function in linking constructions. The same phenomenon as with *feel* is to be observed here: for *look*+NP German requires *wie*, whereas English has two possibilities, depending on the semantic relation between subject and complement:

(7) (a) He looks a tough man
(b) He looks like a cactus in the morning

Compare:
(c) He is a tough man
(d) *He is a cactus in the morning

Sentence (7d) is only acceptable if interpreted in a metaphorical sense, which is signalled by *like* in (7b). The class of noun that may occur in sentences like (6b, 7a) seems to be characterized by its evaluative function with regard to the subject.

Smell and riechen fulfil the same functions in the two languages:

(8) (a) Vodka smells nice
(a′) Wodka riecht angenehm

For *smell*, as well as for *taste* (see below), there is a restriction on the type of construction in which both may occur. *Smell*+NP or taste+NP do not seem to be possible, or they are extremely rare at least. The NP — complement has to be construed with *of* or *like* and *nach* or *wie*, respectively, in each language:

(8) (b) It smells of Whisky
(b′) Es riecht nach Whisky
(c) It smells like Whisky
(c′) Es riecht wie Whisky

As regards *sound*, the following sentences may be compared:

(9) (a) That sounds marvellous
(a′) Das klingt (hört sich) sehr gut (an)
(b) She sounds a very nice person (W. 7. 1 - 46)
(b′) Sie Kling (hört sich an) wie eine sehr nette Person
(c) That sounds like a Jaguar
(c′) Das klingt (hört sich an) wie ein Jaguar
(d) That sounds like a bad experience
(d′) (i) Das klingt nach schlechter Erfahrung
(ii) Das klingt (hört sich an) wie eine schlechte Erfahrung

For *sound* there are again three different types of construction, i.e. *sound*+adjective (+NP)+*like*+NP. German has two verbs that may be

used interchangeably. It is apparent that *klingen* or *sich anhören*, if construed with an NP — complement, require *wie* or *nach*, while English has a set of sentences with *sound*+NP that do not have the particle *like* (cf. 9b).

Taste can be found in the following types of sentence:

(10) (a) The wine tastes good
(a′) Der Wein schmeckt gut
(b) It tastes like vinegar
(b′) Es schmeckt wie Essig
(c) The drink really tastes of lemon
(c′) Das Getränk schmeckt tatsächlich nach Zitrone

Here the English and the German verb need a particle whenever the complement is an NP; both *of* (*like* and *nach*) *wie* are possible.

In both English and German the verbs whose semantic paraphrase was given above as 'X be Y to a cehtain sense' are characterized by a particular construction they allow. Compare the following:

(11) (a) The water feels hot to me
(b) The house looks old to me
(c) The milk smells sour to me
(d) That sounds unfamiliar to me
(e) The beer tastes good to me

The phrase *to me* in these sentences indicates the evaluator or experiencer of the sensation concerned [9]. In German this experiencer appears in the form of the dative in the case of *klingen* and *schmecken*:

(11) (d′) Das klingt mir fremd [10]
(e′) Das Bier schmeckt mir gut

With the verbs *aussehen* and *riechen*, however, the equivalent construction results in sentences with a rather doubtful degree of acceptability:

(11) (b′) ?Das Haus sieht mir alt aus
(c′) ?Die Milch riecht mir sauer

Yet these sentences become perfectly normal when they contain a certain type of adverbial:

(11) (b″) Das Haus sieht mir *sehr* alt aus
(c″) Die Milch riecht mir *zu* sauer

[9] Cf. Poldauf (1964) on questions of evaluation in language.
[10] Wahrig (1968), s.v. *klingen* 4.

In such instances the presence of the evaluator, i.e. the dative *mir*, seems to be justified by the adverb of degree. The German counterpart of *feel* as it is employed in (11a), the verb *sich anfühlen*, cannot be used with this particular type of dative, but requires a prepositional phrase instead:

(11) (a′) Das Wasser fühlt sich für mich heiß an

Another possibility of translation is offered by *jemandem vorkommen*, a form that, being semantically emptier than *fühlen, schmecken*, etc., may be used as a substitute:

(11) (a″) Das Wasser kommt mir heiß vor

This form is obligatorily construed with the dative. Another verb that seems to prohibit the dative is *sich anhören*, which was illustrated above in (9). Its partial synonym *klingen* is different in this respect (cf. 11d′).

This restriction on the occurrence of the dative appears to correlate with the presence of the morpheme *an-* in *sich anfühlen* and *sich anhören*, but more examples will have to be examined before this may be treated as a fact.

The possible constructions with *of* or *like* as compared to *nach* or *wie* in German and English deserve some comment, since they reveal various restrictions in the two languages. In English only *smell* and *taste* may co-occur with *of* (cf. exx. 8b, 10c). In German one has *riechen nach, klingen nach, schmecken nach, aussehen nach;* compare examples (8b′, 9d′, 10c′) and the following:

(12) (a) It looks like rain
(a′) Es sieht nach Regen aus

It is only *sich anfühlen* that does not accept *nach*.

Like may co-occur with all verbs of this group, and so can *wie* in the case of the German equivalents. The combination *sich fühlen* (4c′), however, permits also *als*, which is impossible with any of the other verbs.

It is not easy to define the difference between the constructions with *like* (*wie* and *of*) *nach*, because in certain contexts they appear to be exchangeable without incurring any clear shift of meaning. Perhaps it is true to say that the constructions with *smell* (*riechen, taste*) *schmecken*, etc., plus *like*) *wie* have the implication of 'making an impression on the olfactory sense or the sense of taste, etc., as the substance itself denoted by the complement'. Compare the following examples and their paraphrases:

(13) (a) It smells like wine
According to its smell it could be wine
(a′) Es riecht wie Wein
Aufgrund seines Geruchs könnte es Wein sein
(b) It tastes like vinegar
According to its taste it could be vinegar
(b′) Es schmeckt wie Essig
Aufgrund seines Geschmacks könnte es Essig sein

If the verbs in question are construed with *of/nach*, however, the implication is of 'making an impression on the respective sense which is reminiscent of that made by the real substance denoted by the complement'. This could be illustrated by the following sentences and their paraphrases:

(14) (a) It smells of sherry
Its smell is reminiscent of sherry
(a′) Es riecht nach Sherry
Sein Geruch erinnert an Sherry
(b) It tastes of caviar
Its taste is reminiscent of caviar
(b′) Es schmeckt nach Kaviar
Sein Geschmack erinnert an Kaviar

That there is some linguistic support for the semantic difference between the constructions with *like* (*wie* and *of*) *nach* that we have postulated above is illustrated by the following sentences:

(15) (a) Proposals smelling of confiscation (*OED*, s.v. *smell*, *v.*, 9b [1887])
*Proposals smelling like confiscation
(a′) Vorschläge, die nach Beschlagnahme riechen
*Vorschläge, die wie Beschlagnahme riechen
(16) (a) The wine tasted of the cask (cp. *OED*, s.v. *taste*, *v.*, 9 [1655])
*The wine tasted like the cask
(a′) Der Wein schmeckte nach dem Faß
*Der Wein schmeckte wie das Faß
(b) The place, the air tastes of the nearer north (*OED*, *s.v. taste*, *v.*, 9b [1840])
*The place tastes like the nearer north
(b′) Die Gegend, die Luft schmeckt nach dem nahen Norden
*Die Gegend, schmeckt wie der nahe Norden

In (15), *like* and *wie* are impossible since the implication, as was suggested above, is that the denotatum of the complement actually has

a smell; *confiscation* or *Beschlagnahme*, however, belong to a class of noun that does not qualify for this feature. In (16a) the sentences with *like* and *wie* have to be asterisked because *taste like* and *schmecken wie* imply a complement having the feature [eatable] if it is to be tasted, which *cask* and *Faß* do not have; the same holds true for *north* and *Norden* in (16b). *Of* and *nach* on the other hand are possible since they do not imply the presence or reality of the relevant features for smelling, tasting, etc., but indicate a reminiscence of them [11].

Another argument [12] for the distinction we have drawn between constructions with *like* (*wie* and *of*) *nach* is furnished by the following examples:

(17) (a) It smells like sherry
It smells just like sherry does
(a′) Es riecht wie Sherry
Es riecht so, wie Sherry riecht

The compound-sentence construction illustrated here is an impossible paraphrase for sentences containing *of* or *nach*.

In the case of *seem* and *appear* the following examples may be constructed:

(18) (a) She seems happy
(a′) Sie scheint glücklich
(b) She seems to be happy
(b′) Sie scheint glücklich zu sein
(c) She seems (to be) happy to me
(c′) Sie scheint mir glücklich (zu sein)
(d) At first the cat seemed a nuisance
(d′) ?Zuerst schien die Katze eine Plage

The only difference between *seem* and *scheinen* according to these sentences appears to be the constructional restriction that in German an NP — complement requires the form *zu sein scheinen*, whereas in English *seem* is possible without *to be*, although usually *seem to be* will be employed in such cases.

Although it is possible in certain contexts to translate *appear* alternatively with *scheinen* or *erscheinen*, the nearest approximation to *appear* would be *erscheinen*. Both may be used in linking constructions, as in demonstrated by the following sentences:

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[11] This difference of meaning explains why *He smells of horses* may be taken as a complement, but *He smells like horses* much less so.

[12] This was pointed out to us by Dr. M. Hellinger.

(19) (a) It appears (to be) profitable (to me)
(a′) Es erscheint (mir) nützlich

In contrast to *appear*, however, *erscheinen* cannot be construed with *zu sein:*

(19) (a″) *Es erscheint (mir) nützlich zu sein

The second reason why we treat *appear* and *erscheinen* together is their use in the sense of 'turn up', i.e. as verbs of motion:

(20) (a) The dog appeared in the garden
(a′) Der Hund erschien im Garten

Erscheinen, however, seems to behave still more like a verb of motion than *appear*, since the only context in which the motion-features are suppressed, thus permitting the linking construction, is that of *erscheinen* + adjective; *appear* in connection with *to be* occurs in a wider range of constructions, for instance with NPs:

(21) (a) He appears to be a teacher
(b) *He appears a teacher

There is only one other possibility with *erscheinen:*

(22) (a) Dieser Vorschlag erscheint uns als nützlich
(b) Dieser Vorschlag erscheint uns als Fortschritt

It is open to further research to determine the exact syntactic and semantic relationship these sentences have to those given under (19).

The German verb equivalent to *prove* in linking constructions is *sich erweisen:*

(23) (a) The new invention proved (to be) useless
(a′) Die neue Erfindung erwies sich als nutzlos
(b) He proved (to be) a coward
(b′) Er erwies sich als Feigling

In contrast to *prove, sich erweisen* is never used with *zu sein*. It always requires *als* when the complement is an NP; in the case of an adjective *als* seems to be usual, although there are examples without it [13]:

(24) Er hat sich mir gegenüber stets dankbar erwiesen

The factors determining the distribution of *als* with adjectival complements are not quite clear yet.

The semantic paraphrase 'X be Y before and after a point t on the time scale' holds for several verbs in English, for instance *remain, stay, keep, go, continue*. The central verb in German would be bleiben. Compare the following examples:

[13] Wahrig (1968), s.v. *erweisen* 2.

(25) (a) She remained happy
(a′) Sie blieb glücklich
(b) He remained a teacher
(b′) Er blieb Lehrer
(c) The coffee kept warm
(c′) Der Kaffee blieb warm
(d) The weather continued calm
(d′) Das Wetter blieb freundlich
(e) The crime went unpunished
(e′) Das Verbrechen blieb unbestraft

Both the English verbs of this group and their German equivalent need further research before a more detailed subclassification may be attempted.

Finnally we have to mention the group of verbs with the meaning of 'X be Y after a point t on the time scale', which in English consists of about ten members, such as *become, fall, get, grow*, etc., whereas German has only *werden*. Examples are easy to find:

(26) (a) He becomes a teacher
(a′) Er wird Lehrer
(b) He became old
(b′) Er wurde alt
(c) The child fell ill
(c′) Das Kind wurde krank
(d) The student got nervous
(d′) Der Student wurde nervös

The particular problems that arise from such a situation, where a whole set of partially synonymous verbs in one language is confronted with just one verb in the other language will be dealt with below (cf. § 2.3).

The survey of linking verbs in English and their German equivalents that we have given above was only to serve three major purposes:

(a) it demonstrated that all the semantic components, or paraphrases, given above (cf. 1) are lexicalized in English and German;
(b) it showed that the two languages differ in the number of lexicalizations of one basic semantic paraphrase, so that one has to inquire about further relevant semantic features that may determine subclasses;
(c) it made obvious that the syntactic characteristics of the verbs in question vary considerably between the languages and within one language, while the basic semantic relation of attribution and the essential features of the respective subclasses remain constant.

2.3 SEMANTIC CONSIDERATIONS. As was pointed out above, all the sementic components we had stated for the English set of linking verbs are also to be found in the various German verbs. In other words, the two languages make use of the same set of semantic distinctions.

Preliminarily, these semantic distinctions might be regarded as belonging to a universal set, which, in our case, appears *in toto* in both languages. Whether all of the distinctions introduced above (cf. 1) can be called universal, will depend on further analyses of various languages with respect to these distinctions. At least the basic form of attribution appears to qualify for a universal semantic relation if one considers the analyses published by Verhaar (1967 ff.).

The semantic components we have discussed so far would have to be classified as criterial for the respective subclass. Within the subclasses the various members may be differentiated by another type of feature that one may call *latent feature* after Kempson-Quirk (1971), i.e. a feature that may be activated or suppressed by the context.

Two examples shall be briefly discussed in order to illustrate this phenomenon.

The verbs *go* and *turn* are members of the subclass containing *become*, etc., i.e. they are characterized by the same criterial feature (cf. paraphrase 1k). The following contexts, in which they were tested according to the methods described in Quirk-Svartvik (1966) and Greenbaum-Qurik (1970), demonstrate, however, that the two verbs are distinguished through a particular latent feature. The contexts were:

(27 (a) The man — — — — violent
(b) The man — — — — insane
(went, turned)

(28) (a) The animal — — — — ferocious
(b) The animal — — — — quiet
(went, turned)

The distribution of the verb forms by the informants was significant in each case: *turn* collocates with *violent* and *ferocious*, *went* with *insane* and *quiet*:

(27′) (a) went : 1 (1,4%)
turned : 68 (98,6%)
(b) went : 68
turned : 1
(28′) (a) went : 3 (9,7%)
turned : 28 (90,3%)
(b) went : 28
turned : 3

The feature distinguishing the two verbs might be called [visual agitation].

The second example to be mentioned furnishes a demonstration of the semantic differentiation of two constructions. The verb phrases *grow* and *grow to be* were tested in the following contexts:

(29) (a) He ———— tall and stately
(b) He ———— angry
(grew, grew to be)
(30) (a) She ———— older and older
(b) She ———— very old
(grew, grew to be)

In each case, *grew to be* collocated with the complement having the feature [permanent] or [static], i.e. with *tall and stately* and *very old*:

(29′) (a) grew : —
grew to be : 67 (100%)
(b) grew : 67
grew to be : —
(30′) (a) grew : 64 (97%)
grew to be : 2 (3%)
(b) grew : 2
grew to be : 64

It will be obvious that such semantic differences between members of one subclass, based on latent features, do not find a counterpart in German, since in each case German would use *werden*. In other words, the two languages are identical with regard to the criterial sementic features within the area of linking verbs, but differ, quite naturally, in contextually determined latent featurs.

2.4 SYNTACTIC CONSIDERATIONS. In order to summarize the various characteristics that appeared in the comparison of the two sets of verbs, the following points may be mentioned. Within each of the two languages there are differences that a description somehow has to account for. To give an example for English, one might consider the possible constructions with *of* and *like* in which *smell* and *taste* may occur, but not *feel*, *look*, and *sound*, which permit only *like*. For German it could be pointed out that some verbs have to be used with the reflexive pronoun, whereas others are construed without (*sich anhören, sich fühlen, sich anfühlen* vs. *schmecken, aussehen, klingen*, etc.). It is still an open question whether these variations are merely accidental surface-structure phenomena or whether there are semantic correlates as yet undiscovered.

A comparison of the two languages has to describe the phenomena

that in German all NP- complements require one of the particles *wie*, *als*, or *nach* except in the case of *sein* and *scheinen*, whereas English permits the construction V + NP for several other verbs. Further, *appear* may be construed with *to be* while *erscheinen* never co-occurs with *zu sein*. Another area is that of the different semantic-syntactic realizations of certain semantic features (*feel* vs. *sich fühlen* and *sich anfühlen*; cf. exx. 4,5).

It will be apparent that many more questions apart from those enumerated here await a detailed contrastive analysis within the field of linking verbs, and that these questions are closely connected with general problems of semantics and syntax. It would appear that the findings of a contrastive analysis can throw some light on the controversial problem of their interrelationship.

2.5 PEDAGOGICAL IMPLICATIONS. Obviously, the semantic and syntactic problems pointed out in the last two sections are of considerable importance for the teaching of English to German students or of German to English students. Since the fundamental categories and constructions can be found in the inventory of both languages, the teaching material may be restricted to introducing the equivalent constructions of the other language without having to explain in detail their basic semantics and syntax. Emphasis will have to be laid on the differences, which, in our case of the syntactic variations mentioned above, may be classified as surface-structural and have to be learnt via the lexicon and certain language-specific syntactic rules.

The latent features exemplified in section 2.3 will present a more problematical area, since they are not at all clearly defined for all the various verbs in English or German, and since their introduction into the teaching process would presuppose quite a detailed knowledge of, and familiarity with, the respective foreign language. Presumably, only cases of wider application can be integrated into the teaching material. Thus, the negativity of the complements following *go* (*go mad, go wrong*) is often mentioned [14], and similar cases might be added.

Generally, the differences between the languages as regards lexicalizations, which in many cases are linked to these latent features, as well as other fields might be isolated by setting up tables for convergent and divergent phenomena [15]. Thhe subsequent examples demonstrate conver-

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[14] Cf. *OED*, s.v. *go* 44, Jespersen (1909 - 49 : III, 386) and Jones (1936). The same problem is posed by the results of Greenbaum (1970): the teacher can only select the most characteristic collocations and present them at some stage in the process of learning as a regular feature of English.

[15] This was pointed out to us by Doc. dr. Reszkiewicz, from Warsaw University.

gence 31) and divergence (32) from the point of view of English, and the opposite for German, if read from right to left:

(31) (a) become, come, fall, get, go, grow, run, turn, wax, wear → werden

(b) continue, go, keep, remain, stay → bleiben

(32) (a) feel → sich fühlen / sich anfühlen

(b) sound → sich anhören / klingen

(c) smell → riechen / duften [16]

Such tables may be used as a first indication of problem areas for teaching purposes. But it is obvious that more detailed analyses of the two verb groups in English and German are required before, on the basis of statistical considerations of frequency of occurrence, one can profitably make a selection of the various linguistic facts for inclusion in teaching material.

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[16] Whereas in the case of *feel* the two reflexive verbs of German represent the lexicalizations of the two uses of *feel* as a linking verb (cf. exx. 4,5), *riechen* is equivalent to *smell in all its senses* ('detect', 'seek', and 'emit'; cf. Quirk [1970 : 119 ff.]), but *duften* has only the meaning of 'emit' plus the inherent feature [pleasant].

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SOME SURFACE AND DEEP ASPECTS OF CASE IN POLISH AND ENGLISH

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At the December 1970 Conference at Karpacz, some basic aims and methods of the Polish-English Contrastive Studies Project were formulated. In the opinion of most participants, a specific contrastive study should be unidirectional and possibly lead to some bidirectional generalizations which could bear on and supplement or modify the current linguistic theories. It was postulated that contrastive analyses should be correlated with problems of translation equivalence and their results should be utilizable for elaborating effective teaching materials, methods and procedures. With those objectives in view, it was further suggested that contrastive studies should deal primarily with surface structures of the languages under investigation but deeper correspondences should be looked for as well.

The present paper is an attempt at presenting a fraction of the vast area of similarities and differences that hold between Polish and English, as well as formulating certain theoretical generalizations about the nature of the sementic structures. Being a part of a larger whole (Konderski, in preparation), however, it cannot fully and adequately account for even that fraction. Consequently, some statements and suggestions may seem unjustified or prematurely formulated with as little evidence as can be presented here. It is hoped that the fuller treatment of the problems sketched in this paper will be provided with greater explanatory power and, for the time being, some of those problems may be clarified in the discussion.

The larger work, of which this paper, is a compilation of some non-sequential fragments, originated some time ago with the author's considerations of the perspectives for a machine translation project in Poland. The Polish-to-English direction of the analysis stems, among other factors, from the conviction that the needs for machine translation of Polish texts into English far exceed the demands for the opposite direction procedure. It is realized, however, that this particular direction (i.e. Polish to English) presents more difficult problems than the opposite one since, as it has been widely recognized and experienced, the formal analysis of

synthetic forms in which the Polish language abounds is much more complicated than the synthesis of such forms from an analytically-oriented input, such as English.

Since the publication of Weaver's Memorandum in 1946, machine translation has been undergoing its ups and downs everywhere the MT projects were started. Poland has been witnessing this fluctuation from a position of an observer rather than active participant although some attempts have been made in this contury, indeed, both on the lingustic [1] and technological sides of the problem, with particulary the latter being effectively hindered, however, by the lack of suitable computers combining adequate storage capacity and access with high operational speed. As my inquiries have revealed, new technological possibilities have been recently made available and, what is at least equally important, the interests of linguists in the problem have not faded, as was demonstrated at the Seminar on the Application of Computers for Natural Language Analysis, held in Warsaw two weeks before the present conference.

The main work mentioned above deals, generally speaking, with the identification of English equivalents of Polish case forms, aims at forming certain generalizations about the nature of those equivalent structure and meaning signals in both languages as well as about the nature of the deep relations manifested by those signals and, in addition, offers some terminological proposals.

Of necessity, the scope of the analysis has been narrowed down to the so-called oblique cases, further, to those oblique cases which occur in adverbial positions, i.e. those whose forms are substantially determined by the (potential) presence of number and case variables and the absence of gender variables. The sample presented here will be confined to the dative case in Polish and its English equivalents. With the previously mentioned restrictions in mind, the following instances of the dative case in Polish will n o t be considered [2]:

A. The form of the dative case is determined by a preposition which in tis turn may be 'tied' to the verb:

(1) a. Stało się to dzięki zbiegowi okoliczności.
b. Postąpił wbrew zdrowemu rozsądkowi.
c. Poszli powoli ku domowi.

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[1] These can be found e.g. in some works of Irena Bellert, Jan Tokarski, and Olgierd Wojtasiewicz.

[2] English equivalents are therefore not given. In each sentence of group A, B, and C, each first italicized word is a case determining word, and each second italicized word — a determined word in the dative case. Idiomes, e.g. Janowi idzie piąty krzyżyk 'John is in his forties' have not been considered.

d. Świadek świadczył przeciwko oskarżonemu.
e. Powiedz im o tym gwoli prawdzie.
f. Wszystkie gazety są po złotemu.

As it happens, the dative case in Polish may by governed by a relatively small number of prepositions exemplified in 1a-f, the preposition po being very rare and limited to a few constructions like *po jednemu, po dawnemu.*

B. The form of the dative case is determined by an adjective, adjectival participle, gerund, or infinitive:

(2) a. Człowiek jest niezbędny nauce.
b. Nadszedł okres sprzyjający zmianom.
c. Pomaganie matce jest obowiązkiem każdego.
d. Wierzyć przypadkowi to zginąć.

C. The form of the dative case is determined by a noun:

(3) a. Służba ojczyźnie jest godna pochwały.
b. Ona nie wygląda na matkę dzieciom.

D. The formative in the dative case is not a noun, i.e. it belongs to a class different from that which is characterized by the (potential) presence of number and case variables and the absence of gender variables:

(4) a. Zrobiłem mu krzywdę.
b. Usiadł sobie.
c. Podaj to choremu.
d. Trzeba wybaczyć błądzącym.
e. Jeden drugiemu wilkiem.
f. Wszystkiemu winna zła pogoda.

For the purpose of our analysis, then, we are left with the following clauses or clause types containing a noun in the dative case (italicized in the Polish clauses):

(5) *Janowi* było wygodnie. / John was comfortable.
(6) *Janowi* się nudziło. / John was bored.
(7) Bob uciekł *Janowi*. / Bob ran way from John.
(8) Bob przyglądał się *Janowi*. / Bob watched John.
(9) Bob poskarżył się *Janowi*. / Bob complained to John.
(10) Bob zrobił *Janowi* stół. / Bob made a table for John.
(11) Bob ściął *Janowi* kwiat. / Bob cut a flower for John.
(12) Bob znalazł *Janowi* konia. / Bob found a horse for John.
(13) Bob kupił *Janowi* koszulę. / Bob bought John a shirt.
(14) Bob dał *Janowi* prezent. / Bob gave John a gift.
(15) Bob powiedział *Janowi* prawdę. / Bob told John the truth.

(16) Bob wyjaśnił *Janowi* problem. / Bob explained the problem to John.
(17) Bob zapłacił *Janowi* pięć dolarów. / Bob paid John five dollars.
(18) Bob pogratulował *Janowi* sukcesu. / Bob congratulated John on his success.
(19) Bob zazdrościł *Janowi* żony. / Bob envied John his wife.
(20) Bob otworzył *Janowi* drzwi. / Bob opened the door for John.
(21) Bob ukradł *Janowi* pieniądze. / Bob stole some money from John.
(22) Bob wybaczył *Janowi* winę. / Bob forgave John his guilt.
(23) Bob poświecił *Janowi* latarką. / Bob lit (something) for John with a torch.
(24) Bob oświetlił *Janowi* drogę latarką. / Bob lit the road for John with a torch.
(25) Bob zapłacił *Janowi* pięć dolarów za tę książkę. / Bob paid John five dollars for this book.
(26) Bob dał *Janowi* prezent dla Toma. / Bob gave John a gift for Tom.

For the sake of convenience and uniformity of persentation, all the Polish clauses have been brought down to the form of active statements with verbs in the third person singular form of the Past Tense (Perfective or Imperfective). For the same reason, the English equivalents have been rendered in the Past Tense. In each case, out of possible equivalents [3] the one produced by native speakers most automatically and naturally has been selected.

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[3] In fact, I assume, and this point will be developed in the dissertation, that in most cases in the target language there can be only one, if any, full equivalent of any source language clause, and this equivalent is the clause 'automatically' produced by a native speaker of the target language, provided he has been adequately acquainted with the linguistic and extralinguistic contexts in which the source clause in question was or could be used. Consequently, the opinion that since word order in Polish is free while in English it is fixed, every English clause may have many equivalents in Polish, is considered to run counter to the linguistic intuition of the native speakers of both languages, as well as to some observable facts in the process of communication. For our purpose, however, the features signalling the distribution of information among clause constituents and corresponding to the speaker's intention or intuition will be ignored and thus will not effect the notion of equivalence.

It is to be noted that the role of a native speaker here is that of a producer of an automatic linguistic response to a linguistic or non-linguistic situation rather than that of an expert deciding on the acceptability or unacceptability of a given string as a sentence of his native language. On the fallacy of the latter opinion and the criticism of the related aspects of the description of natural languages in terms of generative grammar, see (Bellert 1972 : 14 - 15). Note also hesitation in accepting or rejecting certain strings of words as English clauses e.g. in (Halliday 1967 : 54 - 55) or (Corder 1968 : 23).

Before and during the discussion of the above clauses, certain terminological problems will be taken up.

The term 'case' has been usually applied in the grammatical tradition to morphological or synthetic devices for expressing relations among syntactic units. Thus, we may say that the ending — om is the ending of the dative case of Polish nouns in plural. Along with this meaning, however, the term 'case' has been also used to define such analytical means of expressing relations as pre- or postpositional constructions or even sequential ordering of syntactic units. In addition, the term 'prepositional case' has been offered to replace the 'traditional phrase' [4]. The ambiguity of the term forces one to specify whether what is meant is a morphological (grammatical, synthetical, etc.) device or a syntactical (analytical) one. The recent revival of interest in the related problems, manifested e.g. in the works of Fillmore, Robinson, and J. Anderson, suggests terminological separation and disambiguation of the term.

It is proposed that the term case be confined to the inflectional markers and the general term relator be used for such relation signals as case, pre- or postpositions, and sequential ordering [5].

Thus, for instance, in P14 and E14, as well as in their respective variants *Bob dał prezent Janowi* and *Bob gave a gift to John*, the semantic function of Janowi (and of its English equivalents) is rendered on the surface by the dative case relator in Polish and by the prepositional relator or sequential relator in English [6]. The presence of identical or equivalent relations in the semantic structures underlying the corresponding Polish and English clauses accounts for the equivalence of those clauses whereas the difference in the nature of the relators accounts for their non-congruence [7].

On the basis of the fact that each of the above twenty-two pairs of clauses has been accepted by two native speakers as a pair of equivalent

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[4] Cf. the treatment of the category of case by L. Hjelmslev, A. W. de Groot, R. Jakobson, J. Kuryłowicz, and H. C. Srensen.

[5] Including the contrastive vs. non-contrastive distribution of stress, as in the pair: English 'teacher vs. 'English teacher.

[6] The relation remains virtually the same in all these clauses although a 'true' equivalent (i.e. a clause preserving also the distribution of informative load of the source clause) of e.g. P14 could be only E14, where P14 stands for 'Polish clause 14' and E14 for 'English equivalent clause 14'. See also footnote 3.

M. A. K. Halliday in (1967 : 53 - 54) calls to *John* an adjunct and *John* a benefactive complement and claims that the former does not enter the transitivity network whereas the latter does. Yet, Halliday's arguments supporting this distinction are not convincing.

[7] For a detailed discussion of the notions of equivalence and congruence, see (Marton 1968).

clauses, it is assumed that these equivalents describe or refer to, what has been often called a common extralinguistic situation or context.

It is believed that every speech act originates with the mental reflection of such a situation or context in the mind of the speaker and that this reflection provides a stimulus for the formation of semantic structures which, if such need arises, may be converted into systematic arrays of sounds by means of diversified processes [8]. In other words, following Chafe (1970, 1971), it is believed that the language production process is unidirectional and proceeds from configurations of concepts to various configurations of sounds.

Unlike Chafe, however, I assume: (1) that those initial conceptual configurations are virtually configurations of nominal concepts [9], (2) that the configurations of nominal concepts differ in (a) number of concepts and (b) types of relations that hold among those concepts, (3) that there is a limit to the number of concepts within a maximum range simple configuration, (4) that the relations which hold between the nominal concepts are in fact verbal concepts of states and processes reflected in surface structure verbs [10], and (5) that those relations are marked on the surface by various relators such as case, sequential ordering, pre- or postposition, or stress.

It is argued, then, that verbal concepts do not originate in the mind of a human being except in connection with nominal concept or concepts which may 'mentally' exist on their own, and that the pivotal nature of verbs in sentences is a syntactic, not semantic phenomenon.

In connection with the above standpoint, it is suggested that nominal and verbal concepts should be clearly distinguished from syntactic categorial terms ‚nouns' and 'verbs' and tentatively, the terms nomit and verbit are proposed for a nominal concept and a verbal concept, respectively. Finally, for a simple configuration of concepts the term semit is suggested, it would roughly correspond to the term 'clause' on the syntactic level although, as can be easily imagined and as has been shown in some so-called hypersyntactic analyses (e.g. Wooley 1966), the boundaries of clauses and semits in a language do not always meet. As far as the translation process is concerned, it seems to consist in producing such strings of clauses in the target language that would cover the same semits as are expressed by the given clause strings in the source language.

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[8] The description of such processes is beyond the scope of the present paper. For some interesting ideas pertaining to this problem, see (Chafe 1970), (Hutchins 1972), and (Kay 1970); also P. van Buren's paper in this volume.

[9] Some arguments for the primacy of nominal concepts will be given by Konderski (in preparation). See also (Lyons 1966).

[10] Including e.g. is sad or is out in John is sad (out).

On the basis of the clauses 5 - 26, as well as on the basis of other data (i.e. Polish clauses with non-dative cases and their English equivalents), I would to argue further that the number of nomits within a simple semit may vary between 1 and 3.

Semits with one nomit underlie clauses 5 - 7, semits containing two nomits, clauses 8 - 13 and 18 - 22, and semits with three nomits, clauses 14 - 17 and 23 - 26. It can be seen that the number of nomits does not always agree with the number of nouns in these clauses, as 5 and 6 contain one noun, 7 - 9 two nouns, 10 - 23 three nouns, and 24 - 26 four nouns each. It is suggested that any fourth, fifth, etc. noun in a clause does not directly enter the network of relations within a simple semit and that its occurrence in the surface structure may result from:

(a) coordination of two or more nomits in one function, i.e. each nomit may be theoretically infinitely coordinated with other nomits. In practice, however, the requirements for communicativeness of a message set a limit to the number of such coordinated elements and clauses like *John and Mary and Bill gave the books and the pens to Richard and Thomas and Anthony* are rather avoided.

(b) The occurrence of semit modifiers or semods, i.e. constructions referring semantically to semits as wholes rather than entering the network of relations within them. Examples of such semods are e.g. traditional adverbials of time, place, manner, etc. It is argued that Janowi in P7, P10, P13, P20, P21, P23, and P24 represents such an externally operating semod which can be paraphrased as 'in order to help/hurt John or from John'. With no exception, all these Polish clauses may have as their possible English equivalents clauses with the prepositional for relator and, likewise, *Janowi* in each of these Polish clauses can be replaced by *dla Jana*, i.e. by the preposition dla + the noun in the genitive case, which construction is becoming even more frequent than the dative [11]. Similarly, *sukcesu* in P18, *żony* in P19, and *winę* in P22 are externally operating semods, paraphrasable as *on account of his* . . . or *because of his* . . . What was traditionally termed 'the dative of benefit' does not only very often depart from what we mean by 'benefit', as in 21, but also functions semantically in a way different from what it has been commonly assumed to be.

(c) Various types of semit configurations, generating e.g. complex sentences or genitival constructions.

The three basic semit types are [12]:

[11] Daunta Buttler's investigation of the use of analytical and synthetic constructions in Polish has shown that the former type has been expanding and replacing the latter. See (Buttler 1967).

[12] According to what was said before, I assume that there are no semits

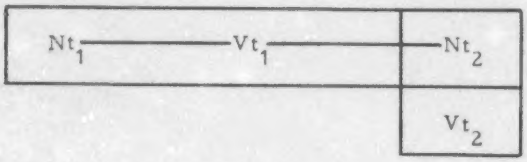
1. $\frac{Nt}{Vt}$ (underlying e.g. 6)

2. Nt ——— Vt ——— Nt (underlying e.g. 8)

3. $\frac{Nt \text{ ——— } Nt \text{ ——— } Nt}{Vt}$ (underlying e.g. 17)

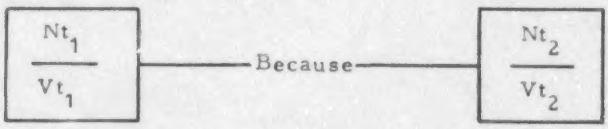
each of which may undergo various operations, e.g.:

(a) each element of a semit may function as a pivot to which another semit can be attached. Such complexes generate e.g. surface genitival constructions. The complex underlying the clause John's car is new can be diagrammed as:



where the horizontal semit underlies John has a car and the vertical semit underlies The car is new.

(b) Semits can be linked to other semits by means of semit relators signalling intersemit relations such as reason, simultaneity, comparison, etc. The complex underlying the sentence John left because he was bored can be diagrammed as:



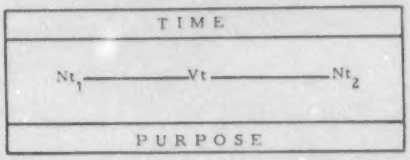
where each semit underlies one constituent clause of that sentence and 'because' is a semit relator signalling the relation of reason.

(c) Semits can be nominalized in the process of generating syntactic

without at least one nomit. For the evidence that the troublesome Polish clauses: pada 'it rains' or grzmi 'it thunders' are derived from nomit-containing semits of type 1, see (Konderski, in preparation). It must be admitted, however, that clauses describing certain natural phenomena do escape the unified treatment just as do certain structures containing nouns of so-called inalienable possession. For the latter, see e.g. (Fillmore 1968), for the former, see (Chafe 1970). Chafe (1970) describes clauses of it rains type as expressing all-encompassing events, without reference to any particular thing within the environment, and he assigns the feature 'ambient' to verbs occurring in such clauses. As regards inalienable possession, compare the English equivalents of Pl1 and *Bob ściął Janowi włosy: Bob cut a flower for 'ohn* but not *Bob cut his hair for John* (in the same sense; instead we have *Bob cut John's hair*.

structures, i.e. they can appear in the surface structure as so-called abstract nouns.

(d) As was suggested before, semits may be externally modified by semods of time, location, purpose, direction, manner, etc. [13] The underlying complex for 11 can be diagrammed as:



The details of the above-mentioned as well of other operations on semits will be discussed at length by Konderski (in preparation).

Nomits may be conceived of as matrices of universal as well as of language or culture-specific semantic features such as: animate, human, male, adult, generic, round, unique, etc. The nature of such features in particular nomit matrices entering particular semits provides the selectional restriction in the selection of potentially applicable verbits out of the verbit set or verbicon. With the selection of verbits the language-general stage of the process ends and language-specific syntactic processes begin to operate, transforming the semantic structures of semits into various syntactic structures of clauses by means of various language-specific relators [14].

The following table summarizes the analysis of clauses 5 - 26, based on the outlined theoretical framework.

English relators are given for all equivalents. Syntactic functions refer to the English equivalent clauses E5 - 26. The terms referring to semantic functions are mine whereas the terms describing syntactic functions are taken from (Reszkiewicz 1963); the symbols (following Reszkiewicz) mean as follows: S — Subject, O — Direct Object, Q — Indirect Object, C — Adverbial Complement, pO — prepositional Object, Po — prepositional Quasi-Object; + means positive occurrence, blank space — non-occurrence. Syntactic functions of the Polish noun in the dative case are not marked in the table; they are: S in 5 and 6 and Q in the other clauses. $Seq._1$ means the occurrence of the item between V

[13] Of which the time semod is always obligatorily present (others being optional). It accounts for the fact that we cannot generate 'tenseless' clauses. (Commands are not 'tenseless' they are non-past and refer to the time following the moment of speaking).

[14] Of course, this description is simplified and omits certain important post-semantic and syntactic processes.

and O, Se[illegible] its occurrence as S with co-occurrent passivization of the verb.

The following observations can be made on the basis of the presented data:

The most frequently occurring English relator, equivalent to the Polish dative case, is the sequential relator marked by the position of a given nominal between the verb and another nominal functioning as O (Sequence$_1$).

For the semantic function of Purpose or Purpose/Beneficiary, the English relators are Seq.$_1$ and preposition for whereas Seq.$_2$, i.e. subject

Clause No	Place of *Janowi* and its English eqs. in semantic structures		Semantic function	Syntactic function	English relators equivalent to Polish dative case				
	Nomit	Semod			Seq.$_1$	Seq.$_2$	Preposition to	Preposition for	Preposition other
5	+		State locus	S		+			
6	+		State locus	S		+			
7		+	Direction	C					from
8	+		Patient	O	+	+			
9	+		Patient	pθ			+		
10		+	Purpose/Ben.	pθ	+			+	
11		+	Purpose/Ben.	pθ	+			+	
12		+	Purpose/Ben.	pθ	+			+	
13		+	Purpose/Ben.	Q	+			+	
14	+		Beneficiary	Q	+	+	+		
15	+		Patient	Q	+	+			
16	+		Patient/Ben.	pO			+		
17	+		Beneficiary	Q	+	+	+		
18	+		Patient	O		+			
19	+		Patient	Q	+				
20		+	Purpose/Ben.	pθ				+	from
21		+	Source	pθ	+	+			
22	+		Patient	Q	+	+			
23		+	Purpose/Ben.	pθ	+			+	
24		+	Purpose/Ben.	pθ	+			+	
25	+		Beneficiary	Q	+	+	+		
26	+		Intermediate	Q	+	+	+		

position before the verb, combined with the passivization of the verb, is not realized.

If an equivalent preposition relator is possible, it is never realizable by more than one preposition.

In the case of relations (as opposed to states), there is almost always a possibility of selecting two or three relators. The decision about the

choice of one or another seems to depend on the distribution of information in the source clause, on the nature of the nominal in question (e.g. on whether it is realized as a noun or as a pronoun), and on the rhythm and melody of the clause. More precise statement about these restrictions and preferences could be attempted after an analysis of a substantially larger corpus, possibly with help of a computer. Such analyses may be very valuable for working out effective algorithms for machine translation projects and their results could be incorporated into foreign language teaching methods and materials.

Insight into the semantic component of linguistic processes seems to offer an extremely interesting and promising path towards discovering new facts about the main medium of human communication: language.

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'MUST' AND ITS EQUIVALENTS IN POLISH

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The importance of the auxiliaries in English can be hardly exaggerated. There is no doubt about the fact that the auxiliaries enjoy the highest frequency in the language. It is mainly through them that it is possible to express the most varied shades of the nature of the predication. It is quite obvious that an English-speaking person who has not sufficient knowledge of the auxiliaries will never be able to express himself freely and so will never feel 'natural' in the language. In view of all this, the auxiliaries (both primary and modal) should be introduced into the learning programme in a relatively early stage.

The present paper is a modest contribution to the analysis of the English modal auxiliaries and their equivalent constructions in Polish. It falls into two major parts: Part A concentrates solely on the description of *must*, and Part B deals with its Polish equivalents.

Part A: *MUST*

In opposition to most writers on English grammar, we assume that *must* manifests only one meaning which may be paraphrased to read: "the actualization of the predication is viewed as necessary by some aspect(s) of the world". The term 'aspect' has been borrowed here from Joos, and it may, among others, include: the will of a person other than the subject, norms or rules functioning in various spheres of social life (e.g., moral code, laws, rules of a game, etc.), the pressure of the relevant circumstances, the state of our knowledge, the will of the subject, etc.

Unlike the 'independent' *shall* (attested in examples like 'Shall I open the window?' or 'He shall not go') which explicitly indicates that the initiation of the action is dependent upon the speaker, or the addressee, *must* in this respect remains neutral. Thus in (1) 'You must do it at once' and in (2) '(Tell him) he must come earlier tomorrow' it may or may not be the speaker that requires the predication. In cases where the speaker acts as the subject it may be himself or somebody else comment-

ing upon whom the action depends. Sentences containing first-person singular subjects turn out to be ambiguous even if they are not extracted from their proper context. (3) 'I must leave now' may in fact be related to either of the following sentences: (4) 'I must leave (my sense of duty, or something of that sort) 'forces' me to leave' and (5) 'I must leave (I start work at seven)'.

(1) to (3), in one of their interpretations, carry an implication of obligation. This is confirmed by the fact that each of them is paraphrasable by the construction *be obliged to*. The following then are legitimate paraphrases of (1) to (3), respectively:

6. You are obliged to do it (at once)
7. He is obliged to come earlier tomorrow
8. I'm obliged to leave

Most grammarians treat the obligation implied in each of the above examples as part of the semantics of the modal. However, an explanation of this distinction in terms of the meaning of the modal (i.e., necessity) and the character of the aspect of the world involved seems to be theoretically more plausible. Notice that if we assume that the speaker himself functions as the aspect, (6) to (8) cease to qualify as possible paraphrases of (1) to (3). Under this interpretation the subject of (3), as it were exercising his own will, chooses to follow the specified course of action.

One of the differences between (1) and (3) lies in that whereas in (3) the subject and the speaker are the same person, in (1) they are two different persons. Examples like (1) are often construed as commands (In such examples we have to do with obligations imposed upon the subject by the speaker). Consider:

9. You must do it (at once)
10. ?You have to do it
11. ?You are obliged to do it
12. I (hereby) tell/order you to do it
13. ?You had to do it
14. I told/ordered you to do it

If (9) is treated as a command, (10) and (11) are very unlikely as its paraphrases. (12) seems to be the only candidate here. Notice also that a 'past time' equivalent of (9) is not (13) but (14).

In sentences implying an 'external' obligation (i.e., obligation imposed upon the subject by some aspect of the world) *must* may be replaced by *have to*, although not in all possible situations. All of the following sentences are synonymous:

15. You must go
16. You are obliged to go
17. You have to go

Under the 'non-obligative' interpretation the substitution of *have to* for *must* in (3) and similar examples is rendered impossible, hence the inadmissibility of (18) 'I have to leave'. Underlying the meaning of (3) seems something like 'I strongly insist on my leaving'. There the subject's insistence appears to be so strong as to make him view the predication necessary.

The use of *must* in sentences implying a suggestion or advice makes the suggestion more persistent, as in:

19. You must come and see us one of these days
20. You must introduce me to your new boyfriend

The circumstances accompanying the elicitation of sentences like (19) and (20) are such as to preclude an idea of obligation or compulsion as imposed upon the subject by the speaker or somebody/something else. Quite clearly, the idea of persistence conveyed in (19) and (20) is not the denotation of must but at best is connotation. In these, and similar, examples the modal is not replaceable by *have to*, which accounts for the ungrammaticality of (21):

21. ?You have to introduce me to your new boyfriend

Earlier it has been pointed out that *must* fails to explicitly indicate the character of the aspect requiring the predication. In contrast *have to*, at least in present tense affirmative sentences, makes it clear that the aspect involved in the matter is not either the speaker or the subject of the sentence. Let us consider:

22. You must be back in camp
23. You have to be back in camp

(22) might be produced by an officer giving the orders, whereas (23) might come from a soldier who has been told to inform bis comrades of the orders. The same holds true in the case of (24) and (25). In (24) the subject is called upon to follow the action specified by the main verb because the speaker 'likes it that way'. In (25) the regulations, or something of that nature, may function as the aspect demanding the realization of the action.

24. You must call me "Sir"
25. You have to call me "Sir"

To refer an obligation, command or suggestion to some future time, we use *will plus have to*, as in:

26. You'll have to do it
27. You'll have to come and see us one of these days

The use of *will be obliged* to in place of *will have to*, although possible in the case of obligations, is regarded as a feature of formal written style.

Since *must* lacks the past tense form, past time reference is made by means of the past tense form of *have to*.

28. He had to go

Notice that when the past tense element is inserted into the VP, the restriction we have noted to exist between *must* and *have to* (Exs. 22 and 23) becomes totally obliterated. *Had to* is a 'past time' equivalent of both *must* and *have to*, regardless of the grammatical person of the subject with which these happen to combine. (31) is a 'past time' equivalent of (29) and (30).

29. I must go
30. I have to go
31. I had to go

Negation with *must* in eventual, i.e., it invariably applies to the lexical verb. (32), for instance, is synonymous with (33), (34) and (35).

32. (My doctor says) I mustn't eat meat
33. (My doctor says) I'm obliged not to eat meat
34. I'm not allowed to eat meat
35. It's necessary that I shouldn't eat meat

Mustn't cannot, however, be replaced by *don't have to*. (36) is not synonymous with (37), the latter being equivalent to (38) and (39). Consider the examples:

36. You mustn't go
37. You don't have to go
38. You needn't go
39. It isn't necessary for you to go

Consider now the sentences:

40. I'll be obliged not to eat meat
41. I won't be allowed to eat meat
42. ?I'll have not to eat meat

(40) and (41) are 'future time' equivalents of (32). Of course, (42) is impossible in English.

In order to negate the meaning of *must*, we use *need* plus *not* (*needn't*). The following are the negative counterparts of (43) and (44):

43. I must go
44. You must drink it
45. I needn't go
46. You needn't drink it

The absence of necessity in the past is signalled by *ne dn't* plus *have*, as in:

47. You needn't have done it
48. She needn't have read it for today

Needn't plus *have* implies that the action did actually take place although there was no necessity for it to occur. *Didn't have to* indicates that the action was not necessary so it did not (probably) happen.

In the examples that follow it is the state of our knowledge (consisting in statements accepted by us to be true) that acts as the aspect of the world requiring the occurrence of the predication (E.g., if we assume that the statements: 'X is Y' and 'Y is Z' are both true, then it necessarily follows that the statement 'X is Z' is also true):

49. It must be cold outside
50. I must be dreaming
51. He must be dying

(49) to (51) are simply logical conclusions and *must* here points to the necessary relation between the conclusions and the premises (i. e., statements recognized by the speakter as being true) from which they logically follow. Notice also that what is implicit in each of the above examples is a strong conviction on the part of the speaker as regards the truth or reality of what he is speaking about. Uttering (49), for instance, what the speaker actually says is something like: 'I am certain/sure that it is cold outside'.

To our knowledge none of the available handbooks of English mentions the possibility of substituting *have to* for *must* in sentences bearing the character of inferences. However, sentences like the following do occur in English:

52. You have to be crazy (to do that)
53. It has to be somewhere here

The following two examples are taken from Hammond Innes' The Strange Land, and here they are provided together with their surrounding contexts:

54. There was something odd about the man, of course. 'There had to be for him to come a thousand miles to a remonte hill village for next to no money. '(p. 20).
55. I sat down, feeling dazed, thinking how senseless it was. There were hundreds of square miles of mountains. Why did it have to be here, in this exact spot?' (p. 100).

Have to may be regarded as a stylistic variant of *must* appearing in 'inferential' statements containing verbs which do not admit of an 'obligative' interpretation. It is evident that none of the (52) - (55) Examples allows for an 'obligative' interpretation. (53) to (55) contain 'impersonal' subjects. (52) contains a verb that is not subject to human control, and here the speaker seems to imply that he cannot see any other interpretation on the subject's behaviour. It seems that *have to* in this function is more emphatic than *must*. This may be due to the fact that *have to* is much rarer than *must*.

Let us now consider:

56. They must be married

In (56) the possibility of replacing *must* by *have to* is ruled out, since the verb (and of course, the subject) here is subject to an 'obligative' as well as an 'inferential' interpretation. Thus, (56) is ambiguous between the following two interpretations: 'They have to be married (=They are obliged to be married)' and 'It is necessarily the case that they are married'. (56) becomes disambiguated when the perfect aspect is added to the VP, as in (57) 'They must have been married' which may only mean 'It is necessarily the case that they have been married'. As it stands, (57) turns out to be also ambiguous between a 'past' and a 'perfect' interpretation.

A negative inference is expressed by means of *can plus not*. Examples:

58. It can't be cold outside
59. I can't be dreaming
60. He can't be dying

'Past time' equivalents of (58) to (60)are:

61. It can't have been cold outside
62. I can't have been dreaming
63. He can't have been dying

To conclude this part of our paper, it may be pointed out that the use of the 'inferential' *must* is by no means limited to its colligation with *be*. In actual fact, the 'inferential' *must* may freely combine with any

lexical verb, provided the verb is explicitly marked as 'plus habitual' (Boyd and Thorne: 21). To give an example, (64) may be interpreted as an obligation as well as an inference:

64. He must come here regularly

Part B: POLISH EQUIVALENTS OF *MUST*

The Polish lexical equivalent of *must* is *musieć*. It is used to translate *must* in all the types of sentences we have distinguished in the first part of this paper. For instance, the following sentences are translation equivalents of (1), (2), (19), and (49), respectively:

65. Musisz to zrobić (natychmiast)
66. (Powiedz mu), że jutro musi przyjść wcześniej
67. Musisz nas któregoś dnia odwiedzić
68. Musi być zimno (na dworze)

In Part A it has been said that in cases where the subject or the speaker acts the aspect *must* is, in principle, irreplaceable, by *have to* (Exs. 4 and 9). Since Polish has no correspondent of *have to*, it employs *musieć* to translate both *must* and *have to*. Thus the following example is semantically equivalent to both (22) and (23):

69. Musicie wracać do obozu

In translation from Polish into English the learner will often show a tendency to employ *must* even in cases where the usage quite clearly calls for the use of *have to*.

It will be recalled that the meaning of *must* plus *not* is: "the non-occurrence of the predication is viewed as necessary". (70) 'You mustn't do that' implies "a positive obligation not to do that". To convey the meaning of *must* plus *not*, Polish may use either *nie wolno mi* or *nie mogę*. Thus, (71 will be synonymous with (34).

(71) (Lekarz mówi), że nie wolno mi/nie mogę jeść mięsa

Due to the formal likeness of *must* plus *not* and *nie muszę*, the Polish learner will often make the mistake of translating the latter by the former (and vice versa, in translation from English into Polish).

The negative correlates of *must*, that is, *needn't* and *don't have to*, have the following equivalents in Polish: *nie muszę* and *nie potrzebuję*, both followed by an infinitival from. Consider:

72. Nie muszę robić tego (w tej chwili)
(I needn't do it now)

73. Nie potrzebuję przychodzić tu tak wcześnie
(I needn't come here so early)

Needn't plus *have* may by rendered in Polish either by *nie musiał* (the past tense form of *musieć*) or by the modal adverb *niepotrzebnie* followed by the past tense of the main verb. It should be pointed out that *nie musiał* is, as a rule, followed by an 'imperfective' verb (Ex. 74), whereas *niepotrzebnie* takes a 'perfective' verb (Ex. 75). Examples:

74. (Ostatecznie) nie musiałem tu przychodzić
(After all) I needn't have come here
75. Niepotrzebnie to zrobił
He needn't have done it

The past tense of *musieć* is used to cover the meanings of *had to* as well as *must* plus *have*. Examples:

76. Musiał wrócić przed zapadnięciem zmroku
(He had to come back before nightfall)
77. Musiało być bardzo późno kiedy wyszliśmy
(It must have been very late when we left)

Can't plus *have*, i.e., the negative correlate of *must* plus *have*, is expressed in Polish by the modal adverb *niemożliwe* and the main verb in the past tense. Consider:

78. (To) niemożliwe, że Jan ożenił się z Marią
(John can't have married Maria)

Will have to, replacing must in 'future' obligations and suggestions, is expressed in Polish by the future tense of the auxiliary *być* and the past tense of *musieć*. Thus (79) and (80) are the Polish translations of (1) and (19), respectively:

79. Będziesz musiał to zrobić
80. Będziesz musiał któregoś dnia nas odwiedzić

The 'future' counterparts of *must* plus *not* correspond with the Polish *nie będzie mi/tobie/mu* etc. *wolno* and *nie będę/będziesz*, etc. *mógł*, both followed by an infinitival form. Examples:

81. Nie będzie mi wolno palić
(I won't be allowed to smoke)
82. Nie będzie mogła przychodzić tutaj
(She won't be allowed to come here any more)

There are some formal differences between *must* and *musieć* which are likely to create some serious learning problems for the English student of Polish.

One of the distinguishing features of the English modal auxiliaries is that they cannot be preceded by a 'primary' auxiliary (i.e., be, have, do). This explains the ungrammaticality of (83) 'He is must going'. In Polish however, the occurrence of the auxiliary before the modal is quite normal, as exemplified in: (84) 'Będziesz musiał przyjść tutaj jutro przed szóstą' (You'll have to come here before 6 o'clock tomorrow).

Furthermore, unlike its English counterpart, *musieć* is inflected for tense (present and past) and person. Consider the following paradigms:

Present Tense

English	Polish
I must go	(Ja) muszę iść
You must go	(Ty) musisz iść
He/she/it must go	(On/ona/ono) musi iść
We must go	(My) musimy iść
You must go	(Wy) musicie iść
They must go	(Oni/one) muszą iść

In English the elements that can occur in the position between *must* and the main verb are, in principle, restricted to adverbs of frequency and time (e.g., 'John must *always* get up at 7'). But consider the Polish sentences:

85. Nie musimy tam jutro jechać
(We needn't go there tomorrow)
86. Minister musiał to samo mieć na myśli
(The Minister must have had the same in mind)'
87. Musicie tam iść natychmiast
(You must go there at once)

(85) to (87) show that *musieć* may be separated from the main verb by: a. an adverb of time (Ex. 85 *jutro*); b. an adverb of place (Ex. 87 *tam jutro);* c. both an adverb of time and an adverb of place (Ex. 85 *tam jutro*); d. an objective NP (Ex. 86 *to samo*).

Finally, in Polish the negative particle *nie* (*not*) always precedes the modal, as in: (88) 'Nie musisz przebierać się do obiadu' (You needn't change for lunch).

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SOME REMARKS ON THE RELATION BETWEEN THE COMPLEMENTIZER AND THE FORM OF THE VERB IN THE COMPLEMENT STRUCTURE IN ENGLISH AND POLISH

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The two languages considered in this paper, English and Polish, do not operate only by simple sentence structures. Complementation is one of the processes which provide for an infinite set of strings by means of embedding sentences in other sentences [1]. The existence of some parallel and some different complement constructions in English and Polish is apparent and only logical [2]. A complete presentation of predicate complementation in the two languages is the subject for a lengthy dissertation. The aim of this paper is to point out some problems connected with the presence of complementizing morphemes, i.e. complementizers, in the sentences of English and Polish.

Complementizers are the media for introducing sentential complements into the sentence structure. They have no meaning of their own either in English or in Polish.

The approach assuming that the complementizing morphemes are not generated in the base but are inserted into tne underlying structure by means of the Complementizer-Placement Transformation is adopted here (cf. Rosenbaum 1967 : 25). In a different approach the derivation of complementizers takes place in the underlying structure through the operation of context-free rewriting rules.

The phrase structure rules generating strings on which T_{CP} operates for English are the following (cf. Rosenbaum 1967):

PS Rule 1 $\quad VP \rightarrow V(NP)(PP)\left\{\begin{matrix} S \\ PP \end{matrix}\right\}$

PS Rule 2 $\quad NP \rightarrow Det\ N(S)$

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[1] Relativization and conjunction are the other two processes which use the same device of recusion.

[2] Basic for this contrastive paper is the assumption that the rules for complementation and, consequently, the deep structures in Polish may be identical or similar to those in English.

In Polish the following two PS rules are central to the generation of predicate complement structures (cf. Rothstein 1967):

PS Rule 1 $$VP \rightarrow V \left(\left| \left(\left\{ \begin{matrix} NP \\ PP \end{matrix} \right\} \right) \left(\left\{ \begin{matrix} NP \\ PP \end{matrix} \right\} \right) \right| \right)$$

$$\left| \begin{matrix} (NP) & S \end{matrix} \right|$$

PS Rule 2 $$NP \rightarrow \left\{ \begin{matrix} \text{Det N} \\ \textit{to S} \end{matrix} \right\}$$

If the SD is met the transformational rules introduce the following complementizing morphemes into these phrase structures:

English: that, for, to Poss, ing, and the so-called wh-complementizers [3],

Polish: ze, żeby/aby/by, Inf, Nom.

Some of the morphemes co-occur: FOR-TO, POSS-ING, ŻEBY-INF, some are mutually exclusive: FOR never occurs with THAT, THAT does not co-occur with either ING or TO. Similarly, in Polish INF is mutually exclusive with ŻE and NOM, etc.

Both in English and in Polish different complementizers are grammatical in different sentences: +*I know that John to come* is as ungrammatical as +*Wiem, że Jan przyjść*. Apparently a one-to-one correspondence cannot be established between English and Polish structures.

Among the multiple problems of predicate complementation and the role of complementizers in the processes of embedding the following seem to require closer attention in the contrastive analysis of English and Polish:

1) the transformational rules introducing, changing, or deleting specific complementizers in both languages,
2) the influence of a higher sentence verb and its form on the selection of complementizers,
3) the influence of a lower sentence verb on the choice of complementizers,
4) verbs marked and unmarked for the application of some complementizers,
5) complementizers common and uncommon in the two languages,
6) the effects of different complementizers on the same verb,
7) the relation between the complementizer and the form of the verb of the complement structure.

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[3] In sentences like: I dislike it w h e n you do it
I know w h e r e he went
I doubt i f / w h e t h e r he is going
This group of complementizers is not taken into consideration in the present paper.

Of these only 6 and 7 will be discussed in this paper.

Both in English and in Polish some verbs admit more than one complementizing morpheme.

(1) he likes for Mary to wear this dress
she loved John's singing in the bathroom

(2) zapomniałam zawiadomić Jurka/ I forgot to inform George
zapomniałam, żeby zawiadomić Jurka
zapomniałam o zawiadomieniu Jurka/ I forgot about informing George

In the above examples the choice of complementizer is merely stylistic. The meaning of the verbs is not altered by the selection of different complementizers.

However, in

(3) he told her that she had written a good paper

(4) he told her to write the paper as soon as possible
he told her that she should write the paper as soon as possible

the semantic reading of (3) would be different than that of (4) · *tell* (3) would belong to the verbs of communicating whilst *tell* (4) would be included in the verbs of ordering (cf. R. Lakoff 1968 : 20). Polish even prefers the use of the verb *kazać* as a translation equivalent:

(3') powiedział jej, że napisała dobry artykuł
(4') kazał jej jak najszybciej napisać ten artykuł
(4'') powiedział jej, żeby jak najszybciej napisała ten artykuł

The lexicon should contain features semantically specifying verbs for the selection of complementizers *powiedzieć* (3') states the fact whereas (4'') refers to action. According to some authors the diffirence in the semantic reading of a sentences is considered to be due to differences in its embedded sentences.

Even the superficial comparison of the complement structures in English and Polish reveals some correspondence between the complementizers of both languages. The prevailing ways, of translating these elements from one language into the other would provide good material for setting up equivalences. Hence: NOM tends to correspond to POSS-ING [4], INF to TO, ŻE to THAT, ŻEBY to FOR-TO. This, however, is mainly a translation correspondence, not a structural one. For example, the infinitival complements are less frequent in Polish. And when they occur they tend to correlate with the complementizer ŻEBY:

(5) he wants people to visit him

[4] POSS functioning as an object to NOM. The higher sentence verb imposes the case on the NOM.

(5') chce, żeby go odwiedzać/odwiedzić
(6) the officer ordered /for/ the soldier to leave the room
(6') oficer rozkazał żołnierzowi, aby opuścił pokój
(6'') oficer rozkazał żołnierzowi opuścić pokój

Examples presented above show that in some cases in Polish the pair ŻEBY-INF may be considered equivalent to the English pair FOR-TO. Compare the two pairs of sentences:

(7) John wants to come
(7') Jan chce przyjść
(8) John wants anybody to come
(8') Jan chce, żeby przyjść/przychodzić

The deep structure of 8,8' contains a dummy subject. In 7,7' the subject of the higher sentence and the lower one is the same.

ŻEBY, similarly to NOM and INF, is introduced into the underlying structures containing the dummy auxiliary. Nominalizations and infinitives are, by their very nature, tenseless forms both in English and in Polish.

The aspect, however, of the complement verb joined with the NOM complementizer seems to be of unportance in Polish. Compare:
(9) oskarżyłem go o malowanie złych obrazów
(9') oskarżyłem go o namalowanie złych obrazów
Sentence (9) gives ambiguous time interpretation.

ŻEBY and ŻE, analogically to English THAT, require a real auxiliary in the embedded sentence in order to enable the generation of grammatical sentences. ŻEBY demands the past tense form of the verb in the lower sentence when its subject, different from that of the higher sentence, is explicitly stated. The time factor is, however, irrelevant:
(11) Jan zaproponował Pawłowi, żeby przyszedł na obiad
(12) Przedsiębiorstwo wymaga, aby pracownicy lepiej pracowali

In Polish the pronominal subject of the complement must be deleted. The person, number, and gender markers are retained by the complement verb and/or by the complementizer: ŻEBY-m, -ś, -śmy, -ście. If left in the sentence the personal pronoun is used for the purpose of emphasizing the agent:
(13) Chce, żebyśmy my to zrobili

The English sentences containing THAT-complementizer observe rather strictly the rules of tense sequence between the higher and lower sentences, unlike in Polish where the auxiliary of an embedded sentence refers to the time of action, no matter what auxiliary is present in the higher sentence.

From the point of view of language learning the relations between the complement structures are of primary importance. Varying complement patterns in the two languages would either interfere or create difficulties by being completely new structures. Complementizers and the patterns they introduce should be learned along with the verb from.

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THE POLISH AND ENGLISH FRICATIVES — A PROBLEM IN PHONOLOGICAL EQUIVALENCE

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The theory of the phoneme in its classical form actually contradicts identification of phonemes across language boundaries stressing differences and all but ignoring similarities between languages.

Weinreich (1953) obviates the question of phonological equivalence by a strict division of language into form and substance and assignment of phonic interference to the level of substance ("structural no man's land"). This does not, of course, mean that he excludes the theory of the phoneme in considering languages in contact (cf. e.g. his first three types of phonic interference).

Haugen (1954, 1956, 1957) makes a step forward by expanding the notion of the phoneme to include the biligual phoneme, the diaphone, according to which the identification of the phonemes of a target language is effected through a physical similarity of allophones and their assignment to the phonemes of the native language, e.g., a Pole identifies the English glottal /h/ with the Polish velar /x/ enriching, as it were, the Polish /x/ phoneme by an additional "biligual allophone". The three types of diaphones posited by Haugen are thus an attempt at accommodating the theory of the phoneme to the synchronic comparison of phonological systems of different languages.

Catford (1965) makes a distinction between translation equivalence and formal correspondence. Translation equivalence in phonology is "the relation of the SL and TL phonological units to the same phonic substance". His formal correspondence refers to the equation of those phonemes in the two languages that occupy the "same" place in the phonological systems of the compared languages. The latter is apparently determined by parallel oppositions and the number of terms in the compared subsystems.

Milewski (1962) seems to offer the most explicit treatment of phonological equivalence (Catford's formal correspondence) and we will examine it in greater detail. He bases his notion of phonological equivalence on the theory of phonological oppositions saying that "equivalent are those

phonemes that occur in identical positions in identical oppositions, whereas non-equivalent are those that do not occur in any identical oppositions" (Milewski 1962 : 13). E.g. P(=Polish) and AE(=American English) (p) may according to this definition be considered as equivalent because they occur in the same positions in the oppositions:

labial stop : dento-alveolar stop	/p/ : /t/
labial stop : velar stop	/p/ : /k/
labial stop : labial fricative	/p/ : /f/
labial stop : labial nasal	/p/ : /m/

and although P /p/ occurs additionally in the opposition

labial stop : palatal stop	/p/ : /c/.

In other words for phonemes to be considered equivalent it is sufficient that they appear only in **some** identical oppositions and not **all** of them. Phonemes that appear in identical oppositions alone would be considered identical, which is impossible if we are concerned with comparing two different systems. Thus equivalence of phonemes is here defined as partial rather than complete identity.

On the other hand, P /c/ is non-equivalent to any of the AE phonemes because there is no phoneme in AE that would fill the left position in the oppositions:

palatal stop : dento-alveolar stop	/c/ : /t/
palatal stop : labial stop	/c/ : /p/ etc.

It also follows from the definition that equivalent phonemes must have certain features in common.

Milewski's definition without imposing too many constraints to render the comparison impossible, seems to constitute a sound scientific basis and, at the same time, it consistently follows from the theory of the phoneme. However, in practical application it creates a number of difficulties and shows some weakenesses. P and AE fricatives may serve as an example.

	AE		P		EQUIVALENT
LABIAL	f	v	f	v	+
DENTAL	Θ	ð	s	z	+
ALVEOLAR	s	z	ʃ	ʒ	+
PALATAL	ʃ	ʒ	ɕ	ʑ	+
VELAR			x		–
GLOTTAL	h				–

It will be seen that a mechanical juxtaposition according to Milewski's principle (in terms of traditional articulatory features) gives baffling results because AE /θ ð/ appears to be equivalent with the P /s z/, AE /s z/ with P /ʃ ʒ/ and AE /ʃ ʒ/ with P /ç ʑ/. Such juxtaposition contradicts the native speaker's intuition and is contrary to the condition of naturalness. This interpretative difficulty may be partially avoided by applying a subdivision into fricatives and sibilants. Such subdivision is feasible on the basis of the following articulatory differences:

(a) double friction — at the place of articulation and at the teeth

(b) and/or grooved shape of the tongue in the sibilants.

Fricatives may be defined negatively as constrictives that do not have these features. One problem is solved this way.

	FRICATIVES				SIBILANTS				EQUIVALENT
	AE		P		AE		P		
LABIAL	f	v	f	v					+
DENTAL	θ	ð					s	z	−
ALVEOLAR					s	z	ʃ	ʒ	+
PALATAL					ʃ	ʒ	ɕ	ʑ	+
VELAR			x						−
GLOTTAL	h								−

By this operation we render AE /θ ð/ non-equivalent to the P /s z/, however there still remains the problem of the P and AE /s z ʃ ʒ ɕ ʑ/ P /s z/ appears to be non-equivalent to any of the AE phonemes, and we are faced with the unnatural equivalences of AE /s z/ to P/ʃ ʒ/ and AE /ʃ ʒ/ to the P /ç ʑ/. Thus, from the point of view of phonological equivalence in terms of the features of the place of articulation a Pole should identify AE /s z/ with P /ʃ ʒ/, and AE /ʃ ʒ/ with P /ç ʑ/. To ascertain the identifications we have made two experiments.

I. A list of 130 English words was prepared and taped by a speaker of AE. It included:

15 tokens of AE /s/
14 „ „ AE /z/
14 „ „ AE /ʃ/
4 „ „ AE /ʒ/

randomly dispersed among the 130 words.

Each word was read twice. Eight subjects (Polish students of English of varying ages and degrees of proficiency in English) were asked to identify the initial sound of each word and write it down in what would be the ordinary spelling of the heard sound. In the case of (ʒ), the subjects were

asked to identify the word-medial consonant in the final 18 words. The number of tokens subject to confusion were:

AE /s/ ——— 15×8=120
AE /z/ ——— 14×8=112
AE /ʃ/ ——— 14×8=112
AE /ʒ/ ——— 4×8= 32

Results

	P					
AE	s	z	ʃ	ʒ	ɕ	ʑ
s	100%	–	–	–	–	–
z	–	100%	–	–	–	–
ʃ	9%	–	87%	–	4%	–
ʒ	–	7%	–	93%	–	–

Discussion

1. 100% of tokens of AE /s z/ were identified with P /s z/.
2. It is hard to account for the fact that other than with the P /ʃ/, the AE /ʃ/ was more readily identified with the P /s/ than the P/ ɕ/. Also, 7% of the AE /ʒ/ were identified with the P /z/, and none with the P /ʑ/.
   Other sources (Doroszewski 1938) state that in the dialect of Polish Americans AE /ʃ/ is interpreted as P /ɕ/ in borrowings: shop — siapa /'ɕapa/, finish — finisiować /finʲi'ɕovat͡ɕ/, moonshine — munsiajn /'munɕajn/, etc.

II. A similar experiment was made with 17 American students. A list of 120 words contained:

9 tokens of P /s/
8 tokens of P /z/
9 tokens of P /ʃ/

The total number of tokens subject to confusion was:

P /s/ ——— 9×17=153
P /z/ ——— 8×17=136
P /ʃ/ ——— 9×17=153

1. P /ʃ/ was identified with the AE /s/ only twice — 1%.
2. No identifications of the P /s z/ with the AE /Θ ð/ were found. This

would confirm the correctness of the subdivision into fricatives and sibilants.

3. There is an overwhelming predominance of identifications of:

P /s z/with AE /s z/ — 93% and 99% respectively
P /ʃ / with AE /ʃ/ — 97%

Results

AE

AE	Θ	ð	s	z	ʃ	ʒ	t͡ʃ
s	–	–	93%	2%	5%	–	–
z	–	–	–	99%	–	1%	–
ʃ	–	–	1%	–	97%	–	2%

General conclusions

1. The features of the place of articulation are not as important in the perception of these sounds as it may be claimed. We have assumed — after Tytus Benni (1923) — that the relevant features in the sibilant series in Polish and American English are hissing, hushing and whisper. Thus, these phonemes in P and AE are equivalent and are defined as:

P, AE /s z/ hissing sibilants
P, AE /ʃ ʒ/hushing sibilants

while P /ç ʒ/ whisper sibilants are non-equivalent.
NB on the basis of similar experiments we have assigned the same relevant features to the P and AE affricates on the basis of the manner of release.
As opposed to hissing, the effect of hushing is characterized by:

(a) wider constriction between the blade of the tongue and the place of articulation
(b) a wider groove in the tongue
(c) a slight protrusion of the lips.

The whisper effect of the P /ç ʒ/ is characterized by:

(a) an i-shaping of the tongue
(b) as in the hissing and hushing, a narrowing between the teeth sufficient to produce friction of the air directed toward them through the fronto-palatal construction.

2. From the point of view of methodology the establishment of phonological equivalence is of capital importance since it constitutes a scientific basis for the comparison of phonological system. As we see from the comparison of the Polish and American English systems of fricatives, the establishment of phonological equivalence on the basis of the theory of the phoneme creates difficulties and requires a number of necessary operations (subdivisions, classifications, etc.) to meet the conditions of linguistic intuition and naturalness. Moreover, in the establishment of phonological equivalence we have excluded the question of frequency of phonemes in the text also postulated by Milewski. If we took this restrictive factor into consideration, the picture would be even more complicated.

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ASPECTS OF EMOTIVE LANGUAGE: INTENSITY IN ENGLISH AND POLISH

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Contrastive studies seeking to describe the similarities and the differences Between English and Polish have been focusing on the fundamentals, that is on the sound and the grammatical systems of standard educated, possibly "objective" forms of the two languages. This is a natural course of action, or to use another phrase, a logical avenue of attack, since any contrasting of two languages in less significant aspects when the fundamentals have not been sufficiently dealt with might be understood as a 'soft snap' for anyone working on such a project, or as an illustration of illogic in handling linguistic material. The contrastive studies expected to give an insight of the interference phenomena which stem from structural differences between two languages, and it is these phenomena that constitute *the* major problem in the process of learning and/or teaching. The Center for Applied Linguistics maintains that "a careful contrastive analysis of the two languages offers an excellent basis for the preparation of instructional materials, the planning of courses, and the development of actual classroom techniques" (Ferguson 1965 : V).

I would like to re-phrase this quotation by introducing a minimal lexical change: "complete" instead of "careful", though the original word can be understood in the same way, I believe. Complete contrastive analyses should cover all components of the communication process, the fundamental and the marginal ones, and the more so since the notions of fundamentality and marginality are highly relative. They depend on the order of priorities set up by the analyst: as a phonetician he may give a more extensive treatment to phonetics and phonology; as a student of syntax — to syntactic structures. If he happens to be primarily interested in semiology or semiotics, then his order of priorities may still be different from the other two.

The present paper undertakes to discuss several linguistic elements used in English and in Polish to convey intensity which is one of the aspects of emotive language. The discussion is given a semiotic framework, which means it is solely concerned with problems sometimes seen as marginal by those concerned with grammar only.

It is almost a commonplace to observe that impersonal, neutral or, as it were, "objective" language is rarely used in interpersonal communication. A substantial part of this communication is charged with emotions, which may roughly be classified into positive and negative ones. Extensive treatment of emotional processes and of classification of emotions can be consulted in Reykowski (1968) and in Obuchowski (1970).

Man is able to respond emotionally to language. The response comes as a result of the communication process which includes elements accepted in a given language as carriers of emotions, e.g. words and phrases such as *Liar! Kłamca! I love you. Kocham się. Traitor! Zdrajca! I hate you. Nienawidzę cię. I think he is a moron. Uważam, że z niego baran.* Expressions of this kind arouse both the speaker and the hearer. Reykowski maintains, however, that it is a simplified presentation of the matter, because people normally react to a number of elements or components of a situation and not to a single feature of it only (Reykowski 1968 : 170).

It seems that a lexicon analysed impersonally or objectively reveals scarcity of words always carrying a high emotive load. This is explained by the fact that emotions are the most subjective reactions man can experience and emotive meaning ascribed to standard lexical items varies from person to person.

> "Zdolność słów do przekazywania emocji zależy od tego, jakie człowiek miał z nimi doświadczenia. (...) Tak np. słowo „komunista" u jednych wzbudza emocje wzniosłe, podczas gdy u innych budzi nienawiść, poczucie zagrożenia. Tak samo rożnie odbierane będą słowa „milicja", „wojna", „krew", „pogarda", „kłamstwo", „brutalny", i inne. Różnice będą zależały od środowiska, w którym się człowiek wychował, od zasad, które przyswoił, od doświadczeń, które przeżył. Systemy wychowawcze nastawione są na to, by pewnym słowom nadać określony emocjonalny sens. (...) Również usiłowania propagandy zmierzają do tego, by pewnym słowom nadać określony odcień emocjonalny" (Reykowski 1968 : : 170 - 71).

From the foregoing one may conclude that an attempt at a systematic analysis of emotive language in objective terms would be a futile effort, but the conclusion would only be partially true. Emative language is analysable and can be described systematically. The fact remains, however, that it is a neglected area of language study, although it is not totally absent from interdisciplinary research (Sebeok et al. 1964).

This neglect leads to a particular situation in the applied linguistics area: students are usually exposed to non-emotive foreign language structures only, and if there is any attempt on the part of the instructor to provide some information on the emotive structures, this information is usually superficial and highly impressionistic. Of course it results from the lack of appropriate materials presenting the problem on the language teacher's level. Another reason is that very frequently language instructors

are not native speakers themselves, which in case of emotive communication teaching is a deficiency. It does not necessarily mean that a native speaker could theorize better on the subject but at least he may provide genuine emotive patterns to his class, while a non-native can hardly ever do it spontaneously.

Insofar as the learners are expected to acquire only a limited command of a foreign language (passive skills of reading and translating which are indispensable for research purposes) there is no need to present to them a systematic description of emotive forms in that language: they would hardly ever have an opportunity to use this knowledge. On the other hand, the situation is different when the learners are trained to acquire a command approximating that of a native speaker. All Polish students taking courses at our Institutes of English Philology or Departments of English at several Polish universities may serve as a good example. They study English for five consecutive years to receive Master of Arts degrees either in English literature or in English language. They all should have one thing in common: knowledge of all aspects of the English language.

Since the courses offered at our university departments of English are similar throughout Poland one may afford generalizations based on observations from one school only.

Working as an instructor of English at the University of Warsaw I noticed that the students lack formal training in emotive forms of English. This shortcoming of the curriculum has some serious implications of psychological and linguistic nature. In terms of linguistic implications the shortcoming accounts for the existence of a barier or a *communication ceilling*, to coin a phrase. Analysing the English of our fourth and fifth years' students the most advanced ones, that is, one can see they have no problems with grammar and are familiar with standard, educated and even sophisticated vocabulary. Yet their English from other registers is rather limited in scope, including colloquialisms and slang, which are thoroughly neglected in the English departments all over the country. It is clear that the moment they venture into the area of emotive language they are bound to stumble over it (we must exclude here those students who had spent a number of years in some English-speaking countries). This stumbling occurs both in writing and in speech. As to speech, one can predict that it is the interference of emotive Polish which is at work here; in writing the students' performance may be poor because they are hardly ever requested to exercise in a systematic way a variety of English emotive expressions. Since emotive English is presented to Polish students piecemeal and haphazardly it is no wonder they fail at it and therefore it seems that a contrastive differential study of emotive Polish and emotive English could be of use here.

The present paper was prompted by the need for starting the work on such a contrastive study. The community of linguists may be genuinely busy subordinating languages to current linguistic theories and for this reason they tend to by-pass less essential problems in applied linguistics. It is a considered opinion of the author of this paper that it would be a waste of precious time to wait with the discussion of the problems of emotive language until the fundamentals of Polish and English are given exhaustive comparative treatment in a publication. The work on these allegedly minor aspects of the communication process should get off the ground now so that the necessary research can be conducted in all areas simultaneously, if the future series on Polish and English structures are to be really and truly complete.

The problem specifically dealt with in this work is intensity as an aspect of emotive language. It must be stated at the outset that space restrictions limit the range of the presentation and the minuteness of detail.

Feelings seem to belong with features of personality but their linguistic reflection may be discussed in a formal framework. For that purpose we should start with introducing the notion of intensity. In everyday speech we are "deeply shaken" or "deeply moved". Such phrases signal the existence of some depth dimension. In our considerations we are not interested in the depth dimension because it is an extra-linguistic element. Admittedly the outward or surface manifestations of feelings or emotions are dependent on this extra-linguistic element but at the same time they can oscillate only within the limits accepted by a given culture; consequently, by a given language. Psychology offers a definition of intensity: "Intensity is the distance from the feeling threshold", that is from the personal state at which feeling is just manifested (or ceases to be manifested) as feeling (Stern 1938 : 34). Exact determinations of emotional intensity in terms of personal depth of feelings are hardly feasible. Only physiological phenomena accompanying emotional states e.g. skin temperature, changes in heartbeat, can be determined instrumentally but again it is no task for a linguist. The linguist is interested in the surface manifestations of emotions and he can only deal with relative degrees of intensity. When the object of study is a contrastive analysis of two languages it becomes necessary to find out how both these languages indicate these relative degrees of emotional intensity. It was Bloomfield who made the following observation:

> Our language will use a phrase where other uses a single word and still another a bound form. (...) As to denotation, whatever can be said in one language can doubtless be said in any other: the difference will concern only the structure of the forms, and their connotation. What one language expresses by

a single morpheme will in another language require perhaps a long phrase; what one language says in a word may appear in another language as a phrase or as an affix (Bloomfield 1933 : 277).

Learning a second language we are at times surprised to see that the simple names for synonymous simple expressions in the two languages do not stand in the one-to-one relation; in order to obtain a strictly synonymous expression we must resort to a paraphrase or a syntactical word complex: Polish 'dłoń' and English 'palm of the hand'. Designations of colours are frequently given as illustrations of the above statement, e.g.

pink . . . . . jasnoróżowy
acquamarine . . . . . koloru wody morskiej
ox blood . . . . . koloru ciemnej krwi

The simple expressions may also stand for a conceptual synthesis. Such conceptual syntheses may be unlimited in number, yet in practice they always are. What these conceptual syntheses are depends with different speech communities on external and internal circumstances, such as the stage of technological advancement, development of interests, common experiences, spiritual life, etc. Such conditions are reflected in linguistic designations: complicated concepts with high frequency take on a simple form, while complicated concepts of low frequency often retain their complex linguistic form. This conceptual synthesizing can be described in other linguistic terms, suggested by Jakobson (1959 : 233), as *interalingual translation* or rewording, which is an interpretation of verbal sings by means of other signs of the same language. Slang usually abounds in intralingual translations and so does emotive talk.

When contrasting two languages we sometimes notice that similar conceptual combinations are designated by simple expressions in both languages but we could not treat them as synonyms because of only partial overlapping of their meanings. What is more, even if we deal with logical identity of expressions in different languages we should not forget about their emotive loads which may differ between themselves.

Historical development of the English lexicon was so vigorous that indeed not many languages can claim such an abundance of approximate synonyms. Naturally, this becomes a major obstacle in learning for foreign students of English. To acquire a command of English close to that of the native speakers foreign students must continually build up the stock of synonyms being aware of their shades of meaning. Authors of books on the making of English point out that, as a general rule, when there are two words or phrases expressing approximately the same notion, one of them being of Germanic and the other of French or Latin

etymology, the native word is one that has the fuller emphasis, and the greater richness of suggestion in emotive language. Many of the French words and nearly all the words taken over before 1350 and quite a number of subsequent borrowings and importations, have become part and parcel of the English language, so that they appear to everybody just as English as the pre-1066 stock of native words, yet there are numerous words that have never become so popular. There are as many gradations between words of everyday use and such as are not at all understood by the common people, and to the latter class may sometimes belong words which literary people would think familiar to everybody (Jespersen 1905).

Polish students of English share the same difficulties in mastering the language and they also share them with other foreign learners of English. One of these difficulties is their inability to "feel" the shades of meanings of multiple English synonyms. As to the emotive utterances this inability is particularly conspicuous. It is understood, however, that this could be helped by a systematic presentation of means used in Polish and in English for conveyance of emphasis or intensity, or rather of emotive attitudes. The following is only a tentative suggestion of items to be discussed at length elsewhere (the present author's forthcoming Ph. D. dissertation).

1) Any vowel or consonant can be lengthened or intensified (in certain distributions, naturally) in Polish and English. In writing it is represented by italicizing, spacing repetition of a letter.

Jooohn!	Baardzo ładny!
	Barrrdzo ładny!

2) A phrase or a sentence is intensified:
"You must be out of our mind", yelled Tom.
— Chyba do reszty oszalałeś — wrzasnął ojciec.

3) Stressing the main verb the speaker wants to focus on the meaning of the verb, he wants to juxtapose it with some other verb:
As they entered the lobby of the Times Square Palace Hotel, Joe said, "See, man, this is where I *live*".
I don't think you c a n shoot him.
Bić to go chyba nie będziesz, co? — zapytał chudy.

4) Intensive negation
I did *not* see this fellow / I didn't see this fellow
Polish resorts here to reduplication. See Lewandowski (1970 : 73 - 83).
Nie, nie, nie widziałem go / Nie widziałem go.
Both the auxiliary verb and the negative particle may come under stress in English:

"You *won't* mind going to the post office by yourself, will you?" Polish may have here elements of lexical intensification.

5) Positive intensity (Intensive auxiliary in English)

Lexical intensity in Polish

You *are* clever!	Rzeczywiście jesteś sprytny!
She *is* nice, isn't she?	*Miła* z niej (dziewczyna).

or by a change in the position of adverbial modifiers such as *really, never, ever* (British and American English differ in this respect).

"I don't think I ever had seen a bigger cake."
Chyba nigdy nie widziałem takiego dużego tortu!

The paper should include also a discussion of syntactical and lexical intensifiers as well as those of paralinguistic kind but it would enlarge the body of the work to such an extent that instead of being only a signal of the research in progress it would become a full monograph. There is, however, one more issue: general national characteristics or national spirit in the language. On the basis of my study, which goes far beyond what has been presented here, I am inclined to say that there is a striking lack of intensity in the English lexical items pertaining to emotions, and this observation has already been made by others. The emotional behaviour of the average Englishman is reflected in lack of high intensity, in his speech habits in general, and it was the Englishmen who have set the standard for the English-speaking peoples. Fowler speaks of "a stubborn national dislike of putting things too strongly", "the intemperate orgy of moderation," "the use of understatement not to deceive, but to enhance the impression on the hearer (Fowler 1972 : 383, 550, 610).

It is a well known fact that a tendency to avoid the expression of intense feelings goes hand in hand with the absence of emphatic gestures in the behaviour of the British and also with less dynamic speech habits than those of the Poles. Naturally the English cannot be expected to live without linguistic devices for expressing strong feelings since every human being is overcome by them from time to time. But these devices have not yet been researched fully.

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ON THE CONCEPT OF 'INSTRUMENTAL' CASE

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0.1. In Fillmore (1968) Instrumental (I) appears as a label attached to one of the possible categories characterizing various relations which may obtain between Noun Phrases (NP's) and the Verb (V) of the Proposition, along with such other "cases" as Agentive (A), Dative (D), Factitive (F), Locative (L), and Objective (O). Instrumental is described as "the case of the inanimate force or object causally involved in the action of the state identified by the verb". Under Fillmore's proposal I is thus one of the categories which can appear in expansions of P following the following general rule schema:

$$(1)\ P \rightarrow V + C_1 + \ldots + C_n$$

where the expansions can be realized as V+A, V+O+A, V+D, V+O+I+A, etc. In the dictionary particular verbs are represented in terms of "frame features" indicating sets of case frames into which particular verbs can be inserted. A particular verb can appear in more than one frame. For example, *open in the door opened* appears in the frame __ O, while in *John opened the door* the same verb appears in the frame __ O+A. In *the wind opened the door* the verb *open* is assumed to appear in the frame __ O+I, whereas in *John opened the door with a chisel* the frame is __ O+I+A. The subjectivization transformation accounts for the fact that a particular NP with its case label becomes the subject of the sentence. It is convincingly argued that subject (and consequently object) are notions which can only be related to the surface structure of sentences and that, in most cases the NP which becomes the subject in the surface structure is not marked as such in the deep structure. Instead, the following general rule applies: "If there is an A, it becomes the subject; otherwise, if there is an I, it becomes the subject; otherwise the subject is the O" [1]. Thus in *John opened the door, the key opened the door, the door opened,* Agentive, Instrumental and Objective NP's, respectively become subjects, since the verb *open* appears in the frames __ A+I+O, __ I+O, and __ O.

[1] In Langendoen (1970) this rule is expanded to cover other cases suggested by him, e.g. location or two patients.

0.2. In the UCLA English Syntax Project (UESP), Instrumental is, likewise, considered to be one of the primitive case categories characterizing the relations between NP's and the V in the rules of the Base. The appropriate rule states this situation as follows:

$$(2) \quad \text{Nom} \rightarrow \left\{ \begin{array}{l} \text{Nom S} \\ \text{N (Neut) (DAt) (Loc) (Ins) (Agt)} \end{array} \right\}$$

where Neut corresponds to Fillmore's Objective, while Nom→Nom S is "a recursive rule which if reapplied allows a series of restrictive relative clauses to stack up". (UESP, 1968 : 34).

1.1 In the present paper I wish to 1. argue on the basis of syntactic evidence that Instrumental cannot be treated as a primitive case category on a par with Agentive or Objective (neutral), but rather that each occurrence of surface structure exponents of what Fillmore et al. call Instrumental involves an instance of an embedded sentence in the underlying structure; 2. demonstrate that, semantically, the so-called Instrumental is not a simple relation but that on the contrary it is a complex consisting of various semantic relations; 3. to propose a theory which attempt to explain the facts presented in 1 and 2.

Lakoff (1968) assumes that instrumental adverbs involve in the deep structure the presence of the verb *use* with its object NP realised as the surface structure instrumental adverb. At the same time he claims that the notion Instrumental should be restricted in such a way as to cover only those sentences which express purposive actions with animate agent present or implied in the deep structure. By examining selectional restrictions and co-occurrence relations of synonymous but superficially different constructions and by restricting the scope of the notion of Instrumental in the way mentioned above, Lakoff is able to show that sentences like

(3) John hit Bil with a hammer
and (4) John used a hammer to hit Bill

have the same deep structure. On the other hand, non purposive readings of sentences like

(5) I cut my foot with a razor (=on a razor)
(6) Olaf broke the glass with a broomstick

according to Lakoff do not contain instrumental adverbs. As such they do not constitute counterexamples to Lakoff's claim that all instrumentals involve sentences with *use* in the "instrumental sense" (as opposed to *use* in the generic sense and *use up*). It seems to follow from Lakoff's argument that every instance of the occurrence of Instrumental in

a sentence requires the presence of Agentive NP with the verb *use* in the deep structure even if this NP is only a pro-form, subsequently deleted in those cases when Instrumental NP (object of *use*) becomes the surface structure subject of the main sentence as in *the key opened the door* presumably paraphraseable as *somebody used the key to open the door* and *somebody opened the door with the key*[2]. On the other hand Lakoff, unlike Fillmore, would probably refuse to recognize the subject NP in *the wind opened the door* as Instrumental, on the grounds that no agentive, i.e. no animate, purposive force is involved in the action of opening the door expressed by the sentence in question.

1.2. In an earlier paper (Krzeszowski 1971), in an attempt to formalize the deep structure for two English paraphrases

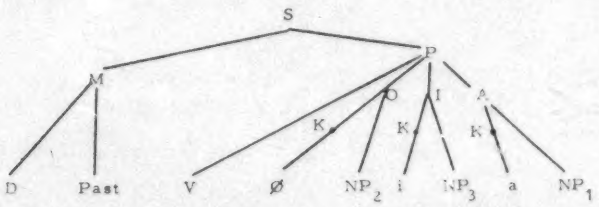
(7) Seymour sliced the salami with a knife
(8) Seymour used a knife to slice the salami[3]

and their Polish equivalents

(9) Seymour pokrajał salami nożem
(10) Seymour użył noża by pokrajać salami

I proposed the following deep structure for the four sentences:

(11)



where D — declarative modality, i — exponent of I on the surface (with or *use* in English and instrumental inflection or *przy pomocy*+gen or *użyć*+*gen* in Polish), a — surface exponent of A (by in English and *przez*+acc in Polish).

1.3. I now believe that although it accounts for the paraphrase relation between (7) and (8) as well as for the equivalence relation between (7)/(8) and (9)/10, this deep structure is not correct for the four sentences in question. Specifically, I think that the so-called Instrumental cannot be considered as a primitive notion and member of the same proposition as A or O but that is derived from two propositions both involving

[2] Note that the transformation deleting Agentive must operate before subjectivization to provide the conditions for the general rule subjectivizing Instrumental and mentioned on p. 105.

[3] Quoted from Lakoff (1968).

Agentive and related to each other in a way to be described in detail in sections 4 and 5. Below are some syntactic arguments supporting the above claim.

2.1. The first bit of evidence was offered by Lakoff himself (Lakoff 1968). Since (8) contains two verbs it must also contain at least two propositions in the deep structure. From the identity of deep structures for (7) and (8), proved on the basis of the identity of selectional restrictions and co-occurence relations, Lakoff concluded that (7) must also contain at least two verbs in the deep structure even though it contains only one verb in the surface structure. The other verb gets deleted by one of the transformations deriving (7) from the same deep structure from which (8) is derived.

2.2. The force of this argument is somewhat weakened by the existence of sentences containing *with*- instrumental adverbs which are not synonymous (cannot be paraphrased into) sentences with instrumental *use*, e.g.

(12) He summoned Bill with a jerk of the chin
(13) *He used a jerk of the chin to summon Bill

Conversely, there are also sentences with *use* in the instrumental sense which cannot be paraphrased into grammatical sentences with *with*-instrumental adverbs, e.g.

(14) John used his influence to obtain a better job
(15) John obtained a better job with his influence

This problem will be taken up and more examples will be discussed in § 3.

2.3. The second bit of evidence is based on the fact that unlike exponents of other cases "instrumental adverbs" can be omitted without ruining well-formedness of a sentence. Consider the following sentences[4]:

(16) Peter opened the tin *with a nail*
(17) She heard *the noise*
(18) *He* listened to her voice
(19) He brought *a parcel* with him
(20) I hit *the wall*
(21) Mary gave *Peter a banana*

In all these sentences, except (16), the underlined words, the exponents of what Fillmore calls Agentive, Dative, Objective and Locative cannot

[4] Instrumental is not the only case which can be omitted in this way. Certain occurrences of Neutral can also be omitted without causing ill-formedness of the sentence, e.g. in He filled the pool *with water* (Neutral). Cf. the discussion on p. .

be ommited without resulting in an ungrammaticality. The fact that the exponents of the so-called Instrumental case in the sentences containing with-phrases can be omitted suggests that Instrumental NP's are less intimately connected with V's than are other NP's and that in the deep structure they may be members of case frames for another verb e.g. *use* or other semantically related verbs.

2.4. Certain verbs like *kill, reduce, destroy, ruin*, etc., expressing completetion and change of state from being to not being (inchoative semantic aspect) cannot co-occur with adverbials of frequency and object singular NP's of constant reference. Thus sentences like

(22) *John killed Mary three times
(23) *Philip reduced the chair to rubble over and over again
(24) *He destroyed his first painting

frequently are ungrammatical. Consequently similar sentences with instrumentals expressed as *with*-phrases are also ungrammatical:

(25) *John killed Mary with a burin three times
(26) *Philip reduced the chair to rubble with his fist over and over again
(27) *He destroyed his first painting with a lancet frequently

One the other hand, adverbials of frequency can co-occur freely with instrumental use and its object NP:

(28) John used a(the) burin three times to kill Mary
(29) Philip used his fist over and over again to reduce the chair to rubble
(30) He frequently used a lancet to destroy his first painting

This difference can only be accounted for when a two-predicate derivation of Instrumental is postulated. Otherwise the adverbial of frequency would have to refer to a single proposition e.g. V+A+O+I+Adv—f and one of two embarassing situations would result: either co-occurrence restrictions on verbs like *kill, destroy*, etc. and adverbials of frequency could not be stated at all in order to allow for the derivation of sentences like (28), (29) and (30), or else with the co-occurrence restrictions properly stated (28), (29) and (30) could not be derived at all. The two-predicate analysis of Instrumental handles the situation quite easily. For (26) and (29), (31) and (32), respectively can be postulated as deep structures:

(31) *((Philip used his fist) Philip reduced the chair to rubble over and over again)
(32) ((Philip used his fist over and over again) Philip reduced the chair to rubble)

In the dictionary the verb *use* will be marked as freely co-occurring with adverbials of frequency, whereas the verb *reduce* and other similar verbs will not be so marked. In this way the derivation of (31) will be blocked.

3.1. Having presented some syntactic evidence for a two-predicate analysis of Instrumental, let me now pass on to the demonstration of the semantic complexity of what was believed to be a primitive case even if somewhat vaguely defined as "the case of inanimate force causally involved in the action or state identified by the verb". It will become evident that the semantic complexity of the so-called Instrumental has syntactic repercussions which render it possible to postulate a variety of underlying semantic structures for sentences with "instrumental" *with*--phrases. Our discussion will be based upon a series of examples taken from the current literature. In each example the underlined words are said to be exponents of the Instrumental case:

(33) (i) *The key* opened the door
(ii) *The wind* opened the door
(34) (i) John (accidentally) frightened Mary
(ii) *The key* frightened Mary
(iii) *The portrait* amazed Mary
(35) (i) Mary was frightened *by John's behaviour*
(ii) Mary was amazed *at John's behaviour*
(iii) He is interested *in architecture*
(iv) Mary was frightened *by the key*
(36) (i) Peter filled the glass *with water*
(ii) Mary covered the table *with cloth*
(37) (i) *He used the telephone* to annoy his teacher
(ii) He annoyed his teacher *with the telephone*
(38) (i) He summoned Phil *with a jerk of the chin*
(ii) He answered them *with a little bang of one fist upon another*

3.2. As Huddleston rightly points out (Huddleston 1969 (33 i) presupposes some unexpressed agentive participant, whereas (33 ii) does not. This is so since *the wind* in (33 ii) itself functions as agent while the *key* in (33 i) does not[5]. Hence it is impossible to paraphrase (33 i) as

(39) The door was opened *by the key*[6]

whereas it is perfectly grammatical to say

[5] For arguments justifying the claim that the distinction between Agent and Force or Agentive Causer and Non-Agentive Causer is superfluous see Huddleston (duplicated).

[6] In fact such NP's as *the key* can appear as Agents but only when recategorized. Cf. Lyons (1968 : 298).

(40) The door was opened by the wind

It is therefore necessary to conclude that (33 ii) contains the subject NP which is semantically different from the subject NP in (33 i) in spite of Fillmore's having labelled them both as Instrumental. As concerns sentences like (33 i) it must furthermore be observed that they do indeed presuppose the existence of an agentive participant. Without such a presupposition they are merely ungrammatical as is the case with some sentences involving Instrumental in which it cannot be subjectivized. Consider the ungrammaticality of

(41) *a sliderule computed the answer
(42) *a new brush painted the wall
(43) *a poker stirred the coal between the bars

In view of the foregoing discussion, the semantic and syntactic differences between (33 i) and (33 ii) will have to be grasped at the level of underlying structure in such a way that for (33 i) the Agentive NP will have to be postulated. It could be optionally deleted by the transformational component. This will account for the fact that it is possible to paraphrase (33 i) as

(44) Somebody opened the door with the key

and that (33 ii) cannot be analogously paraphrased. A more detailed proposal along these lines will be presented in § 5.

3.3. Both sentences in (34) are only superficially similar to (33 i) and they are only superficially different from those in (35). The subject NP's in (34) are related to the V in a somewhat different way from the way the subjects are related to the V in (33). In all three sentences of (34) the source of Mary's fear or amazement was not so much rooted in the entities themselves referred to by the respective NP's ("John", "the key", "the portrait"), but in the way these entities behaved or looked or were involved in some actions or processes. The sentences in (34) are all *vague* with respect to stating the actual reason of Mary's feelings. This speculation is given more substance if sentences in (34) are compared with those in (35). It appears that syntactically they are related since on the one hand the underlined words in (35) can be subjectivized to yield

(45) John's behaviour frightened Mary (=John frightened Mary)
(46) John's behaviour amazed Mary
(47) Architecture interested him
(48) The key frightened Mary

and on the other hand the sentences in (34) can be paraphrased as

(49) Mary was frightened by John (= John's behaviour, or the way

John looked, or the way John wanted to kiss her, or indeed anything that John did or didn't do)

(50) Mary was frightened by the key (= the way the key looked, or anything that happened to it).

These facts, displaying the semantic vagueness of the sentences in (34) in contrast with the sentences in (33) suggest that it may be necessary to postulate a sort of underlying structure for sentences like (34) and (35) in which a whole proposition (however referentially opaque) will function as Agent causing the emotions expressed by the verb in the main sentences. A proposal along these lines is presented in § 5.

3.4. The sentences in (36) represent an interesting subclass of sentences containing the so-colled instrumental adverbs in that these sentences are ambiguous between at least two readings. Upon one reading *the table* and *the glass* are exponents of Locative, while *water* and *cloth* are exponents of Objective. The other reading involves the Instrumental interpretation under which the sentences in (36) are synonymous with

(51) Peter used water to fill the glass

(52) Mary used cloth to cover the table

The sentences in (36) are different from other Instrumental sentences on yet another count: they do not admit of the subjectivization of the Instrumental NP's. Observe that the Subject-NP in

(53) *Water* filled the glass

(54) *Cloth* covered the table

can only be interpreted as the exponents of Objective and not as Instrumentals. In view of the fact that a large class of English sentences with Instrumentals do admit of this sort of subjectivization it must be concluded that sentences like those in (36) must be set apart as different in this respect. The grammatical consequence of this fact is that verbs like *fill, cover,* etc. must be defined in the dictionary as incapable of being inserted into strings where Instrumental NP's function as subjects. As a consequence of this restriction sentences like (53) and (54) can only be interpreted locatively and never instrumentally.

3.5. The sentences in (37) contain instances of the so-called factive verbs, which can take factive nominals as subjects. Prima facie (i) and (ii) of (37) are identical with other Instrumental sentences e.g. with

(55) He used the telephone to hit his teacher

Closer scrutiny reveals some significant differences. First of all, unike in (55) the sentences appearing *to-phrases* in (37) observe very few constraints with respect to their form or contents. As a matter of fact any declarative, agentive sentence, either positive or negative could do, e.g.

(56) He used to talk about colorless green ideas which sleep furiously to annoy his teacher

(57) John did not want to marry a Norwegian to annoy his teacher

In the sentences like those in (55) only sentences containing verbs with Agentive and Objective NP's as their subjects and objects can be used to precede *to*-phrases and a small class of these at that. This situation is a result of the fact that the so-called factive verbs take as their subjects any sentences inserted into the string "the fact that S" which appears in the deep structure of such sentences. The difference between sentences such as those in (55) and sentences with a factive verb as the main predicate resides in the fact that only in the former type of sentences the verbs in the two constituent propositions must be co-referential with respect to the events referred to. Note that it is possible to say

(58) He used the telephone on Monday to annoy his teacher on Friday (=By using the telephone on Monday he caused his teacher's annoyment on Friday)

also

(59) He annoyed his teacher on Friday by using the telephone on Monday

However, it is impossible to say

(60) *He used the telephone on Monday to hit his teacher on Friday

nor

(61) *He hit his teacher on Friday by using the telephone on Monday

In 4) a theory employing the concept of co-referentiality of events (in addition to the co-referentiality of NP's) will be used to deal with these problems. The sentences discussed in this section constitute yet another sort of evidence for my claim that Instrumental is semantically more complex than has previously been thought.

3.6. Finally, the sentences in (38) represent yet another illustration of the complex syntactic and semantic nature of Instrumental. In all these sentences the main verb is one of the verbs denoting communication, i.e. such verbs as *address, speak, summon, answer, etc.* The sentences in (38) are ambiguous between at least two readings. Upon one reading the *with*-phrases are adverbs of accompanying circumstance, upon the other reading the same phrases are Instrumental adverbials. If interpreted instrumentally these sentences can be paraphrased in such a way that the main verb becomes infinitive of purpose while the instrumental nouns of the *with*-phrases become verbs, derivationally related to these nouns. As verbs they function as predicates in the main clause. At the same time

the objects of prepositions in the prepositional phrases modifying the instrumental nouns in sentences like (38) correspond to direct objects of verbs in the paraphrases. In this way (38 i) becomes

(62) He jerked the (his) chin to summon Phil

(63) He banged one fist upon another to answer them

The presence of paraphrases of this sort for sentences like those in (38) makes those sentences different from other sentences with instrumental. Although at present I am not able to account precisely for this sort of paraphrase relation some suggestions will be given in § 5.

3.7 On the basis of syntactic criteria supporting intuitive feeling about the complex nature of Instrumentals I have tried to justify my initial claim that the deep structure of sentences containing the so-called Instrumental is more complex than it has been assumed in the current literature. Specifically, I have tried to show that the various kinds of Instrumentals can be accounted for only if a two-predicate analysis is postulated as well as admission is made that Instrumental is semantically complex and that because of this complexity it must be derived from a variety of sources.

4.1. The theory which I am going to employ in the explication of the so-called Instrumental case makes use of a formal apparatus only remotely related to those variants of TG which are meaning-based [7]. It involves the initial assumption that semantic structure is universal. As such, it constitutes input to particular grammars which are different with all natural languages. Any grammar of a natural language is a diversifying device accounting for surface differences between various natural languages. Grammatical rules operating in a language L_i translate word-forms of L_i into the universal language of the semantic structure and vice versa, translate semantic structure into the surface structure representations. Thus the semantic structure constitutes input to all grammars of al natural languages. These grammars can be but do not have to be transformational grammars. Their output are well-formed sentences of particular languages.

4.2. A grammar of a natural language must consist of 1) universal semantic input, where the fundamental semantic relations, i.e. the meaning of sentences, are represented in the form of universal, category-neutral, semantic input to sentence derivation; 2) categorial component, where language specific rules assigning various categories such as sentence, noun phrase, verb, adjective, tense, modal, demonstrative, etc. to various por-

[7] Section 4 is an altered version of an unpublished paper "Input to Grammars" read at the First Conference on Polish-English Contrastive Project, Karpacz, December 1970.

tions of the semantic representation; 3) syntactic component, where transformations (or other rules which have the same effect) arrange major syntactic categories (noun phrases, verbs, adjectives, and adverbs) in the linear order in which they appear in actual sentences and introduce some of the minor categories (prepositions, auxiliaries); 4) lexical component inserting lexical items from the dictionary where lexical items are defined in terms of syntactic frames of grammatical categories; 5) post--lexical component, where "cosmetic" transformations arrange minor syntactic categories in the linear order in which they appear in actual sentences and erase role labels, indices, and brackets.

4.3. The input structure is representable in terms of graphs or more specifically oriented networks whose knots correspond to various semantic roles such as Agent (Causer), Patient, etc., and whose edges represent relations between knots. In the majority of known languages knots are subsequently realized as NP's, while edges are realized as Predicates. There are four simple roles: Agent (Causer), Patient, Resident, and Locus. Each of the four roles is uniquely defined by the position of a knot with which it is associated on the graph.

4.4. Each graph which can serve as input to sentence derivation is called a configuration. Each configuration can function as a knot in a matrix configuration. A configuration functioning as a knot is called *subconfiguration*. Those knots of each configuration which take part in further derivation are referentially indexed by integers from 1 to n. This reflects the fact that those knots which take part in further derivation $refer_1$ to mental images which in turn $refer_2$ to things and events in the world at large. In this way configurations of indexed knots constitute analogues of extralinguistic situations with each knot representing an entity which can be associated with one or more linguistic structures. For example there may be a knot K_1 $referring_1$ to an image of a certain character known to me which in turn $refers_2$ to a certain man who lived at some time in the past or still lives or else who is only imaginary in which case the relation of $reference_2$ does not obtain at all. The knot K_1 can be associated with various linguistic structures, e.g. *the man whom I met yesterady, or Mr. McClusky, or my greatest enemy.*

4.5. The derivation of each sentence starts with the initial configuration in which all roles are present even if not all knots receive referential indices. In other words some knots of a configuration may be referentially empty and are erased as soon as the appropriate role labels have been spelled out in front of each knot or subconfiguration constituting the initial configuration. What remains is a configuration which actually underlies a particular sentence. Such a configuration is called input

configuration. Each initial configuration is structure according to the following general pattern (with two variants):

(64)

(64)

where particular knots are uniquely and permanently associated with the following roles: the uppermost knot — Agentive; the knot below Agentive — Patient; the knot below Patient — Resident; the knot below Resident — either from left to right from Locus and to Locus, respectively, or at Locus (in the second variant).

4.6. A whole configuration may receive a referential index and become a knot in another configuration, occupying the position in accordance with the role it performs. The sentence

(65) The boy killed the cat

involves the following configuration:

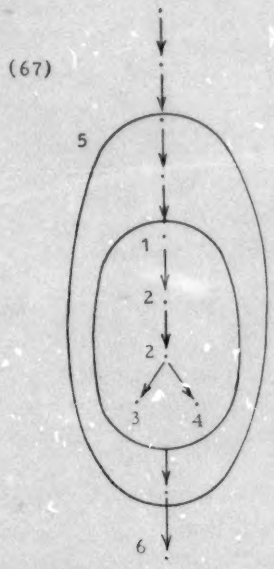
(66)

(66)

where 1 — "the boy" (knot 1 refers$_1$ to the mental image of a boy whose identity has been fixed); 2 — "the cat"; 3 — "living/life"; 4 — "being dead/death". Since the event of killing the cat occurred in the past, it is necessary to place the configuration which is the analogue of this event

as Resident in Time Locus [8]. In this way the input configuration underlying (65) should look as follows:

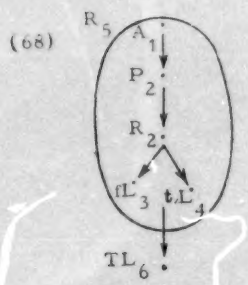
(67)



After the assignment of role labels according to the general pattern of (64) and the erasure of unindexed knots together with the outgoing arrows (67) becomes

[8] All sentences of a natural language must be derived from such complex configurations since all sentences are analogues of events placed in time location. The so-called existential and generic sentences are possible exceptions. In our framework time location is represented as *Time Locus* (TL), i.e. one of the non-innermost Loci of complex configurations. The loci of the initial (innermost) configuration are those of *from Locus* (fL), *to Locus* (tL) and *at Locus* (aL). When the initial configuration is placed as Resident in another configuration its Locus is Manner Locus (ML), if the resulting configuration is in turn Resident in yet another configuration, its *Loucus* is either *Time Locus* or *Place Locus* (depending on whether reference is made to time or to place). According to the general rule of erasing, configurations or their parts which receive no referential index are erased together with the outgoing arrows after the assignment of role labels. Thus, before the application of appropriate rules assigning role labels and erasing non-indexed elements and configurations, the original configuration underlying (65) must look like (67).

(68)



where 5 — "the boy kill the cat"; 6 — "a moment in time preceding the time of speaking".

4.7. Note that fL, tL, and atL can refer as much to spatio-temporal locations as to locations the state of being alive, being dead, being happy, etc. The lexical specification of the knots is given for clarity, although obviously no lexical items are inserted into configurations at this stage of the derivation. It must also be noted that in an overall grammar it might prove necessary to attach different referential indices to every appropriate knot to guarantee the unique association of referential indices with specific mental images (referents$_1$). In fragmentary illustrations, such as the present one, we use integers from 1 to n for each input configuration in isolation from all other configurations. Thus each sentence is examined in isolation from all other sentences which could be uttered to refer to the same referents. In this way we manage to employ the whole concept of reference$_1$ to that extend only which is necessary to explain certain strictly linguistic phenomena without moving into the realms of communicational situation [9].

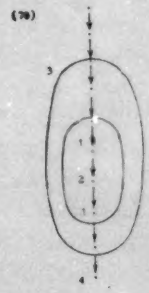
4.8. Sentence (69) and its input structure will provide one more illustration.

(69) John saw the tiger

Its input configuration is

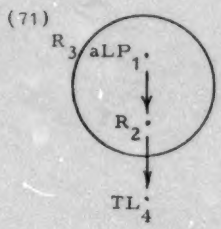
[9] Just how much information concerning reference has to be incorporated into the semantic input and the relevant length of the discourse to be examined will have to be found out empirically. For some discussion of these problems see Krzeszowski (in press).

(70)



where 1 — "John", 2 — "the tiger", 3 — "John see the tiger", 4 — "a moment preceding the time of speaking". After the assignment of role labels and erasure of unindexed knots together with the outgoing arrows we obtain

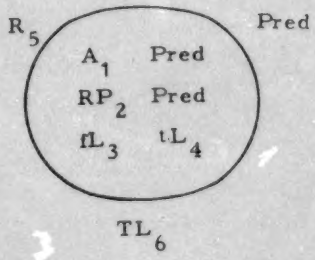
(71)



Observe that the absence of an index from the role A in the subconfiguration reflects the fact that in (69) no Agent is being talked about.

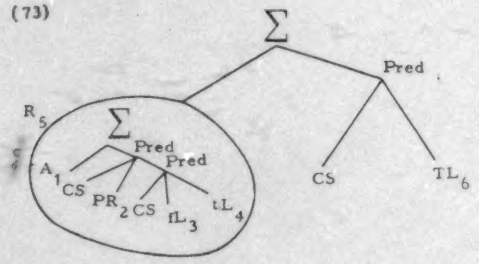
4.9. Apart from the roles, they only universal category in the semantic structure appears to be PRED. It is inserted on the right hand side of all roles except L's (from, to, and at Loci) to replace the dots and arrows of the graphs. Thus (68) becomes

(72)



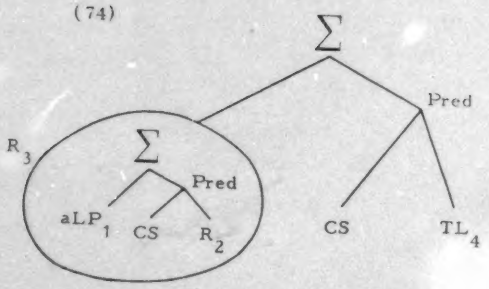
Further universal rules attach each part of each configuration somewhere under the domination of Σ in such a way that the uppermost role is placed under the direct domination of with the PRED associated with a particular role being sister adjoined under the domination of the same Σ. Other roles are placed under the domination of PRED's next above, each PRED dominating a role and its PRED if there is any. The symbol CS (Complex Symbol) is introduced under the domination of each PRED on the left hand side of the role dominated by this PRED. CS's mark the slots in the thus resulting strings where various dictionary entries are inserted to relate roles in meaningful constructions. Thus each configuration can be represented as a tree whose nodes are either roles corresponding to knots or subconfigurations, i.e. encircled configurations with role labels and referential indices attached to them. After the application of the rules, informally described above, (67) becomes

(73)



while (69) becomes

(74)



(73) and (74) can be represented as labelled bracketed strings (75) and (76), respectively, where the material within brackets corresponds to subconfigurations:

(75) R_5 (A_1 CS RP_2 CS fL_3 tL_4) CS TL_6
(76) R_3 (at LP_1 CS R_2) CS TL_4

4.10. It goes without saying that labelled bracketed strings are but notational variants of original configurations (such as (67) and (70)) which are uniquely recoverable from the corresponding strings through a handful of metarules mapping configurations onto strings. Thus particular role labels are uniquely associated with the particular positions of knots in the configurations, materials within brackets are associated with subconfigurations (i.e. materials within labelled and indexed circles functioning as knots in configurations), while CS's are introduced in strictly specified places (on the left hand side of each role dominated by PRED). Since labelled bracketed strings are far more convenient to manipulate both on account of their size and their mnemonic values we are using them in our subsequent to represent the input structure of most sentences used as examples.

4.11. Since the categorial component in English assigns the category NP to every role in every derivation (75) becomes

(77) RNP_5 (ANP_1 CS $RPNP_2$ CS $fLNP_3$ $tLNP_4$) CS $TLNP_6$

while (76) becomes

(78) RNP_3 (at$LPNP_1$ CS RNP_2) $TLNP_4$

The syntactic component transforms (76) into

(79) RNP_5 (ANP_1 CS CS $RPNP_2$) $TLNP_6$

The lexical component inserts lexical items from the dictionary in such a way that only NP's immediately preceding and following CS's and CS's themselves are replaced with lexical entries. Thus (79) eventually yields

(80) RNP_5 (John kill the cat) past

while (78) becomes

(81) RNP_3 (John see the cat) past

The "cosmetic" transformations arrange minor syntactic categories in the linear order in which they appear on the surface erase the brackets with their labels and to produce respectively:

(82) John kill past the cat
(83) John see past the cat [10]

[10] The derivation is naturally greatly simplified as no account is given of such matters as the structure of NP's, noun determination, modality and so on. A more detailed discussion will be presented in a forthcoming work by the present author.

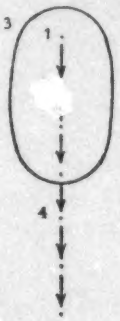
5.1. Sentences with the so-called Instrumentals involve input configurations consisting of A CS P referentially indexed and functioning as A in another configuration of the form A CS P. The P of the subconfiguration is referentially distinct from the P of the matrix configuration. The sentence

(84) John hit Bill with a hammer

is derived from the following input configurations

(85) [11]

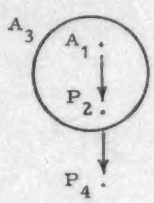
(85)



After the application of the rules assigning roles and erasing unindexed elements the following structure is obtained

(86)

(86)



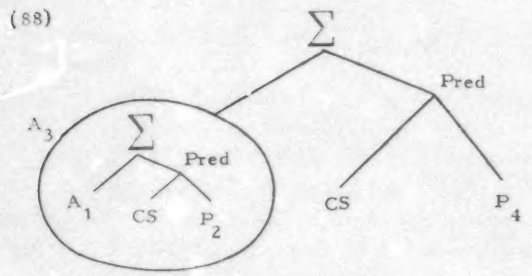
where 1 — "John"; 2 — "a hammer"; 3 — "John use a hammer/John with a hammer"; 4 — "Bill". As a labelled bracketed string (86) can be represented as (87)

(87) A_3 (A_1 CS P_2) CS P_4

In terms of diverging trees (86) can be represented as

[11] The specification of time-place location has been omitted from this illustration as irrelevant.

(88)



After the operation of categorial rules, transformations and lexical insertions (87)) becomes

(89) ANP_3 (John V use a hammer) to hit Bill

which through the operation of post-lexical transformations gives

(90) John used a hammer to hit Bill

Through the operation of different categorial rules and lexical insertions (87) can also give

(91) ANP_3 (John Prep with a hammer) hit Bill

The "cosmetic" transformations will eventually yield

(92) John hit Bill with a hammer

In the dictionary *use* will be characterized as V of replacing CS in ANP CS PNP while *with* will be characterized as a preposition capable of replacing CS in the same context. Observe that *with* can also be inserted in the place of CS in LANP CS RNP as in

(93) The boy with a hammer hit Bill

It is also necessary to distinguish (90) from

(94) John threw a hammer to hit Bill

where *throw* replaces the first (innermost) CS in the following string

(95) RNP_7 (ANP_5 (RNP_3 (ANP_1 CS PNP_2) $TLNP_4$) CS PNP_6) CS $TLNP_8$

where 1 — "John"; 2 — "a hammer"; 3 — "John throw a hammer"; 4 — "a moment preceding TL_8"; 5 — "John throw a hammer at a moment preceding TL_8"; 6 — "Bill"; 7 — "John throw a hammer at a time preceding TL_8 and hit Bill"; 8 — "moment following TL_4". In contrast with (94) the original configuration underlying (90) can be represented in terms of temporal locations as

(96) RNP_5 (ANP_3 (ANP_1 CS PNP_2) CS PNP_4) CS $TLNP_6$

where the event "hitting Bill" is referentially identical with the event "John use a hammer" which is formally represented by placing the two events as Residents in the same temporal location, i.e. TL_6.

5.2. Summing up, the so-called Instrumental in sentences like (90) and (92) appears to be a derived role, involving two configurations of the type A CS P with one of them functioning as A of the other and both referring to the same event. This fact is formally marked by placing the two events in the same temporal lacation. The reader will have noticed that in our theory referential identity of roles, and consequently of NP's, is marked by the identity of referential indices attached to those roles which refer to the same referent. On the other hand, the identity of events is formally marked not only by assigning to them the same referential index but also by placing them as Residents in the same temporal location TL.

5.3. The above proposal is in contrast with Chomsky's suggestion (1969) that the original "Seymour sentence", i.e. *Seymour used a knife to slice the salami* must have the following deep structure:

(97) Seymour used a knife [S Seymour sliced the salami with a knife]S

as opposed to *Seymour sliced the salami with a knife*. Chomsky considers it necessary to postulate different deep structures for these two sentences because of the existence of the following sentences:

(98) John carelessly broke the window with a hammer
(99) John carelessly used a hammer to break the window
(100) John used the hammer carelessly to break the window

which according to him differ in the meaning rendering it necessary to differentiate them at the level of deep structure and apparently contradicting Lakoff's claim concerning the identity of deep structures for pairs like *John broke the window with a hammer* and *John used a hammer to break the window*. It is highly dubious whether (98), (99) and (100), if understood agentively to guarantee the instrumental interpretation of the NP *the hammer*, display any such differences in the meaning which would necessitate postulating a completely different semantic structure for each one of them. It seems obvious that "breaking the window" and "using the hammer" refer to the same event. In all three cases the action of breaking the window was performed carelessly. Any other interpretation of (99) or (100), e.g. involving accidental breaking of the window would contradict Lakoff's initial assumption that instrumental adverbs involve purposive action. Within the framework of the present theory

(98) differes from (99) on account of the fact that different parts of the respective original configurations function as Resident NP's in the Manner Locus (ML). Thus (98) is derived from

(101) RNP_5 (ANP_3 (ANP_1 CS PNP_2) CS PNP_4) CS $MLNP_6$

while (99) originates from

(102) ANP_5 (RNP_3 (ANP_1 CS PNP_2) CS $MLNP_4$) CS PNP_6

In the conventional spelling but with the original bracketing (101) and (102) can be represented as (103) and (104) respectively:

(103) ((John use a hammer) break the window) carelessly
(104) ((John use a hammer) carelessly) break the window

In view of what has been said earlier I fail to see any difference between (99) and (100). Both express an action consisting of careless using of the hammer and the breaking of the window, the two events being co-referential. Observe that the presented interpretation of Instrumental makes it unnecessary to adopt the unconvincing suggestion made by Chomsky that sentences like *John used a hammer to break the window* somehow entail sentences like *John broke the window with a hammer*, which is implicit in (97).

5.4. Having presented the formal apparatus whereby it is possible to define the semantic nature of the so-called Instrumental constructions, let me now pass on to the demonstration of how this same formal apparatus can be used to account for the divergent nature of the constructions presented in section 3.

5.5 With respect to sentences such as (33), which for convenience we now repeat as

(105) (i) The key opened the door
(ii) The wind opened the door

it was remarked in section 3 that the semantic differences between these sentences have to be grasped at the level of semantic structure in such a way that for (105) (i) an Agent NP has to be postulated. It is subject to deletion by the syntactic component just in those cases when its reference has not been fixed. This is necessitated by the fact that (105) (i) can be paraphrased as (106)

(106) Somebody opened the door with the key

(105) cannot be analogously paraphrased. Therefore, I suggest that (107) and (108) are the appropriate semantic structures underlying (105) (i) and (105) (ii), respectively:

(107) ANP_3 (ANP_1 CS PNP_2) CS $RPNP_4$ CS $fLNP_5$ $tLNP_6$

where 1 — "somebody whose reference has not been fixed"; 2 — "the key"; 3 — "somebody use they key"; 4 — "the door" (4 is a complex role implying that "the door" is both Patient and Resident in so far as its changes its Locus from the state of being shut to the state of being open); 5 — "being shut"; 6 — "being open".

(108) ANP_1 CS $RPNP_2$ CS $fLNP_3$ $tLNP_4$

where 1 — "the wind"; 2 — "the door" (2 is a complex role, cf. (107)); 3 — "being shut"; 4 — "being open". Thus (105) (i) differs from (105) (ii) in that only the former involves two Agentive configurations one embedded into the other to constitute the semantic contents of what is called Instrumental. The derivation of (105) (ii) involves only one Agentive configuration, the same one which underlies sentences such as

(109) John opened the door

5.6. The sentences in (34), now repeated as

(110) (i) John (accidentally) frightened Mary
(ii) The key frightened Mary
(iii) The portrait amazed Mary

are all derived from complex configurations containing only one Agent rather than two. The innermost configuration involves only Patient. Nevertheless it functions as Agent in the configuration into which it is inserted. This semantic structure is syntactically justified by the possibility of associating the sentences of (110) with corresponding passive sentences, very much like in the case of sentences containing instrumental adverbs derived from two-Agent configurations. Thus the configuration underlying the sentences of (110) can be represented as

(111) ANP_2 (PNP_1 CS) CS PNP_3

where 1 — "John" / "the key" / "the portrait"; 2 — "something happen to John / the key / the portrait"; — 3 "Mary".

5.7. The sentences in (35) are only superficially different from the sentences in (34) which was commented upon in section 3. All these sentences have the same input configuration i.e. (111) and are related to (45), (46), (47), and (48), respectively. Like in the sentences of (35) and unlike in the sentences of (33) in none of the sentences of (35) is the Agent of the innermost configuration either expressed or implied.

5.8. The sentences of (36), now repeated as

(112) (i) Peter filled the glass with water
(ii) Mary covered the table with cloth

are different from other sentences with instrumentals in that they cannot have as their subjects PNP's from the innermost configurations. As a consequence of this restriction sentences like (53) and (54), now repeated as:

(113) Water filled the glass
(114) The cloth covered the table

can only be interpreted locatively and never instrumentally in contrast with the seemingly identical sentences like (105) (i) (The key opened the door). This restriction is best stated in the dictionary where verbs like *fill* and *cover* will be defined in terms of role frames into which they can be inserted to replace CS's:

$$\textit{cover, fill} \quad . \ \mathrm{V} \left[\begin{array}{l} \mathrm{ANP\ CS\ LNP\ CS\ PNP} \\ \mathrm{RNP\ CS\ LNP} \end{array} \right]$$

Such a formulation makes it superfluous to postulate the feature [± Action] upon verbs. The insertion of verbs like *cover* and *fill* into the role frames RNP CS LNP results in sentences where no Agent and consequently no action is involved. The "static" meaning of sentences like (113) and (114) in contrast with the "active" meaning of the sentences of (112) is thus accounted for. The "instrumental" reading of the sentences in (112) naturally involves the same original configuration as in the case of other "instrumental" sentences i.e. (87).

5.9. For sentences like (37), discussed at length in section 3 and repeated here as

(115) (i) He used the telephone to annoy his teacher
(ii) He annoyed his teacher with the telephone

the following configuration is suggested:

(116) $\mathrm{RNP_7}$ ($\mathrm{ANP_5}$ ($\mathrm{RNP_3}$ ($\mathrm{ANP_1}$ CS $\mathrm{PNP_2}$) CS $\mathrm{TLNP_4}$) CS $\mathrm{PNP_6}$) CS $\mathrm{TLNP_8}$

to reflect the fact that the events referred to by the two Agentive configurations are not necessarily co-referential. In (116) 1 — "he"; 2 — "the telephone"; 3 — "he use the telephone"; 4 — "a moment of time preceding $\mathrm{TL_8}$"; 5 — "He use the telephone at a moment of time preceding $\mathrm{TL_8}$"; 6 — "the teacher"; 7 — "He use the telephone at a moment of time preceding $\mathrm{TL_8}$ and annoy his teacher"; 8 — "a moment of time following $\mathrm{TL_5}$".

5.10. As was said in section 3 the sentences of (38), now repeated as

(117) (i) He summoned Phil with a jerk of the chin
(ii) He answered them with a little bang of one fist upon another

are ambiguous between being interpretable as containing Adverbials of Accompanying Circumstance and Instrumental Adverbials. Admittedly, they are similar to sentences in (37) in so far as *use* is not the only type of verb which can be inserted to replace the CS of the innermost Agentive configuration. On the other hand, both events expressed by the respective parts of

(118) (i) He jerked the chin to summon Phil
(ii) He banged one fist upon the other to answer them

are co-referential which makes these sentences resemble other instrumentals. At the present moment I am unable to suggest an input configuration for such sentences to accomodate these facts. I can only venture the supposition that they, too, must involve two Agentive configurations which are embedded one into the other and which are co-referential.

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THE FUNCTION OF TRANSLATION IN FOREIGN LANGUAGE TEACHING

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The development of linguistic sciences and the rapid increase of practical needs have brought about a violent reaction against the so-called 'grammar-translation' method in teaching languages. The consequence was a complete discredit of translation itself as a teaching-tool: the monostructural version of the direct method totally disregards the native language, both in preparing teaching materials and in classroom practice. The most recent variation, the contrastive or bistructural method, allows for the use of translation in so far as it provides a necessary step towards obtaining the data for contrastive analysis, which in turn becomes a preliminary for grading teaching materials and making decisions concerning their preparation (cf. Krzeszowski 1970 : 83ff, Reszkiewicz 1970 : 20ff). The validity of such an approach cannot be questioned: contrastive studies involve comparison of selected sub-systems of the languages concerned, and, as comparability is proved by translatability, translation has become a recognized criterion for establishing the crucial notion of equivalence. Thus, it must be considered one of the basic devices for all those who plan language courses or write language textbooks, in the same way as it is a basic tool for those who deal with contrastive structural studies for theoretical purposes.

My chief concern here is to try to establish the function of translation in consecutive stages of the language teaching process, i.e. during the presentation, fixing and testing of the material.

As is often the case with radical changes of attitude, the tendency to reject what had been previously taken for granted seems to have been carried too far. It will be my purpose to show that translation could retain some legitimate position in modern language teaching, provided it is defined and applied strictly in accordance with the findings of linguistic science.

It seems that, at least in part, total discrimination against translation in classroom practice is due to a potential ambiguity involved in the term itself. Commonly and intuitively, it is taken to mean 'performing a written translation of a (literary) text'. It is in this sense that the 'grammar-

translation' method made use of translation; in consequence, what was wrong with this method was not that translation was made use of, but that it was used badly. In order to clarify the notion of translation, at least six basic distinctions must be made:

1. Intralingual v. interlingual translation, i.e. paraphrase against translation proper, defined as 'an interpretation of verbal signs by means of some other language' (Jakobson 1966 - 233). In the following discussion it is the latter that is referred to, unless indicated otherwise;

2. product v. process, i.e. translation performed by an author of a textbook or a teacher and then presented to learners in order to clarify some teaching point or to illustrate a contrast between the L_1 and L_2 realization of some linguistic phenomenon, as different from the action of translating, performed by the learners themselves;

3. partial v. total translation, i.e translation performed at some linguistic levels only, as opposed to functional equivalence, that is a complete translation at all levels. This distinction was first introduced by J. C. Catford (1957) who has defined three types of partial translation: phonological, lexical and/or grammatical. Phonological translation involves replacing the L_1 phonology by equivalent L_2 counterparts; in teaching practice, it underlies such bits of practical advice as, eg. 'w pozycji przed (l) krótkie (i) brzmi omal identycznie jak polskie (y)' (Reszkiewicz 1962:12), lub '[połączenie (hj) można wymawiać zupełnie jak polskie (ch) w wyrazie *Chiny*' (Reszkiewicz 1962:80). This is a kind of translation that numerous teachers find very useful. An example of the other kind of partial translation (fortunately no longer encouraged) is found in Irvine's *Praktyczny podręcznik języka angielskiego z kluczem* (1929!): '"I do not learn" tłumaczy się dosłownie: ja-robię-nie-uczyć-się. "Do I learn?" — robię-ja-uczyć-się? Dlatego końcówka "s" przechodzi w czasowniku "do" w formę "does", podczas gdy "learn" zostaje niezmienione'. (Irvine 1929:31);

4. written v. oral;

5. factual v. literary, i.e. translation performed in order to convey information, against translation made in order to reproduce a work of art;

6. foreign to native language v. native to foreign language.

Even such a tentative classification makes one realize that various types of translation can be applied in various teaching situations. The choice would involve such factors as:

1. the aim of the course,

2. the level of the course,

3. characteristics of the learners: age, nationality, previous experience in language learning, the knowledge of 'grammar', etc.

Thus, when plannig a course aimed at teaching spoken English in everyday situations, any written translation will be excluded, while a course

aimed at training a group of translators for industry will make excessive use of factual written translation. Similarly, training professionals to perform simultaneous interpretation will require a great amount of practice devoted to teaching factual oral translation. In both cases, factual translation, written in the first case and oral in the second, can also be appropriately used as an aptitude test, checking the candidates' ability to make good progress during the course and to follow the career for which they are being trained. On the other hand, in such cases translation is seen as an end in itself and not as the means towards an end. The skill of translating is different from, and more difficult than, any of the basic linguistic skills; in fact it is a bilingual skill, and as such it requires special training. Thus teaching translation is a process entirely different from teaching language, and specialized courses, like those for professional translators and interpreters, must employ methods different from those adopted for regular language courses.

It is those regular courses, however, that will be considered here in relation to the possible application of various types of translation.

Common assumptions concerning elementary language courses are that the teaching material should cover, by and large, the whole of the phonological system, a great part of the morphological system, a relatively large vocabulary and a broad choice of syntactic constructions, especially those characteristic of the spoken language. On the advanced level, the material will cover the whole of the morphological system, a wide range of structures characteristic of both spoken and written language, an enlarged vocabulary and some ability to differentiate between styles, dialects and registers in all codes (i.e. oral and written, analytic and synthetic, cf. Reszkiewicz 1970). The scope specified in such general terms is, of necessity, both tentative and arbitrary, just as — contrary to the discussion devoted to teaching beginners — the literature on the subject is scanty and highly incomplete.

It is also assumed that the learners are adults or children over 14 (as teaching languages to young children requires different assumptions and specific techniques), with an average knowledge of the 'grammar' — in the popular sense of the word — of their native language. Other factors, eg. size of groups or kind of textbooks and aids available, will not be considered, as irrelevant to the question under discussion. It is the factor of level that seems decisive, as the function of translation in a language course depends almost entirely on how advanced the learners are.

The principle of general rejection of translation is best justified in teaching beginners. On the elementary level, apart form phonology, three constituents of L_2 are taught: lexis, syntax and idiom. The last, especially

the relative idioms, i.e. semantic combinations of words other than those expected by the learner which are conveniently called 'conventional syntagms', occur more frequently in everyday spoken language than in written registers and as such, they will appear in the very first portions of the teaching material. Therefore, they deserve appropriate attention — something that the old, word orientated methods failed to recognize. It is just those conventional syntagms that make translation an inappropriate teaching-tool; partial foreign to native language translation (i.e. lexical or grammatical) will render ungrammatical, or at least unacceptable, sentences. (Eg. *Jak długo pan weźmie naprawić moje buciki?*, Irvine 1929 : 77) Total translation, if functionally equivalent, will most frequently lack formal equivalence (or congruence) for which all beginners automatically look. To cite a very trivial example, I actually heard *How are you having yourself?* used as a greeting, cf. *How do you do?*. Such word-for-word, or lexical, translation seems both a natural tendency and the chief source of errors caused by negative transfer. (Cf. Halliday, McIntosh, Strevens, 1965 : 266) The literature on the subject provides numerous examples (cf., eg. Krzeszowski 1970 : 74ff); from my own teaching practice come *Jak się pani ma, pani Brown?*, unacceptable in Polish, except for very special registers; or * *She washed her head*, unacceptable in English. The same holds true in relation to syntax — in languages as distinct as English and Polish, equivalence is by no means always accompanied by congruence, and the habit of translating can result in deep-rooted mistakes of the type * *There is a book* (instead of the correct *There is a book there*, cf. Polish *Tam jest książka*) or * *Father Robert's* (instead of *Robert's father*, cf. Polish *Ojciec Roberta*).

Using translation seems more appropriate when teaching lexis: in general, inside elementary vocabulary, extensions of meanings of words translated are not drastically different. But even here some meanings will be best taught in the total context of L_2 (eg. the denotation of the word *lunch* or connotation of the word *bloody*), and lexical translation should be employed only if other methods fail or prove less economical. Eg., with a very limited vocabulary and range of syntactic structures, it might prove difficult to provide a context in which the meaning of a given lexical item could be readily understood. Even then, however, learners should not be made to perform the translation themselves; it should be offered by the textbook or the teacher in the form of functional equivalent, that is as the total, and never purely lexical or grammatical, translation (a good example of this principle is found in Smólska, Rusiecki, Krasnodębska 1971). It does not seem advisable, however, to use such ready translation equivalents to illustrate linguistic differences

between chosen elements of L_1 and L_2 systems: the lack of congruence will in any case naturally become one of the learners' first observations, and, on the other hand, it may prove too early for significant generalizations.

Needless to say, at early stages of teaching, translation should never be used as a testing technique. If applied at all, it could only serve to check achievement as far as the analytical codes are concerned, by administering translation of a written text from L_2 into L_2. Native to foreign language translation, as well as oral interpretation, will be indubitably considered well beyond the level of teaching even by advocates of the translation method. Yet, rather than the actual command of L_2, a translation test will check the special bilingual skill of 'deciphering' the text. Moreover, using translation tests at early stages would lead to 'a concentration on formal equivalence at the expense of contextual equivalence' (Halliday, McIntosh, Strevens, 1965 : 266). All such disadvantages are involved in purely factual translation; introducing translation tests performed on texts which display literary features (as was common practice some 30 years ago) would be pointless: the range of possible renderings would make it utterly impossible for the teacher to score what the learners might produce, even though they were entirely unaware of the significant choice they had been offered. To sum up, translation tests should be discouraged 'when other means exist to test language without translation' (Lado 1961 : 261), and such means do exist, as modern teaching practice and theory have shown (cf., eg. Harris 1969).

To make the picture complete, it might be added that one type of partial translation, i.e. the phonological, has been encouraged and actually found useful by some teachers working with beginners. Pairs of words belonging to L_1 and L_2 respectively and built of foreign sounds and their closest counterparts in the pupils' native system (eg. Polish *tu* v. English *too* or Polish *insekt* v. English *insect*, Reszkiewicz 1970 : 32) make the learners recognize significant differences between contrasting sounds and can prove helpful as a step towards teaching correct pronunciation (cf. also such textbooks as Bałutowa 1965 or Jassem 1965).

Although it might seem somewhat paradoxical, more room for translation can be found in the process of language learning at advanced levels, its possible application in classroom practice growing in proportion to the learners' knowledge of the language taught. Translation will now be disregarded in teaching those parts of the L_2 system in which it might have been previously employed and, conversely, included in teaching those aspects of language for which there could have been no room at early or intermediate stages.

Thus partial phonological translation, successfully used in courses for beginners, will not find any application in advanced teaching. The foreign phonemic system having been learned, instruction aims at teaching recognition and production of sounds at the allophonic level, i.e. concerned with complementary distribution and free variation. Hence, sound contrasts will occur inside one system only, with total disregard of the phonology of the learners' native language.

A similar situation occurs in teaching lexis. On the one hand, the range of vocabulary at the learners' disposal is adequate to convey the meaning of any new lexical item, either through providing an appropriate context or an operational definition. On the other hand, the one-to-one correspondence, established for L_2 lexical items and their L_1 counterparts and valid for elements of a basic vocabulary is disturbed as soon as the learners discover that, with more complex words or more subtle usages, various contexts call for varoius renderings of a given item (cf. Halliday, McIntosh, Strevens, 1965 : 125). The same holds true for numerous grammatical patterns — the exact match is upset when the students realize that eg. English Present Perfect can be rendered by Polish Past, Present or Future (cf. *He has done the work — Wykonał pracę* v. *They have been waiting for an hour — Czekają od godziny* v. *Come after you have finished the work — Przyjdź, jak skończysz pracę*). Introducing such contrasts through translation equivalents can both increase the danger of negative transfer and cause serious methodological difficulties in establishing complete lists of possible correspondences, as these are to a great extent dependent on particular contexts.

Translation equivalents used to illustrate contrasting elements of syntactic structure of the two languages concerned will prove necessary in order to explain systematic differences in derivation, such as absence v. presence of a given rule, differences in 'depth' of languages, obligation v. option in rule application, difference of productivity of a given rule in two languages, etc. Such problems, however, are the domain of contrastive grammar and go beyond 'language' as the term is commonly conceived of when one talks about 'teaching language'. Consequently, they will become a crucial part of a teacher-training course or a specialized course for linguists. They must also be included in the programme of any course aimed at producing proffesional translators. The function of translation in such specialized teaching is in itself an important and complicated subject for research — for obvious reasons, it goes well beyond the scope of the present discussion.

In this place, it can only be said tentatively that translation equivalents, used at advanced levels of language teaching as an ad hoc device,

can prove helpful in systematizing some working contrastive rules at which the learners themselves arrive by automatic induction.

Conventional syntagms, an important constituent of the teaching material in elementary courses, can hardly be listed as a teaching problem at advanced levels. On the one hand, the basic everyday-use repertory should have been already mastered. On the other hand, the novel instances of the so-called 'usage' which the advanced students encounter either in spoken language or in written registers which now provide a larger proportion of teaching materials, are both easier to understand and more readily accepted, as the intuitive tendency towards seeking congruence operates much less strongly than at early stages. It is at this level, however, that language varieties first appear, presenting a wide range of methodological problems. Commonly referred to as 'differences of style', they cover what has been distinguished under such headings as idiolects, dialects (geographical, social and temporal), registers, styles and modes (cf. Catford, 1957 : 83 ff). Apart from some random considerations which come as a result of teaching practice rather than of linguistic theory, so far no full investigation has been carried out on the teaching of language varieties to advanced students. Authors of textbooks seem to agree, however, that it is with this goal in view that intralingual translation, or paraphrase, should be introduced. Thus semantically related sentences are shown to differ in their surface structures, and semantic equivalents are proved to vary in respect of their stylistic value. Introducing interlingual translation of particular variants — both as a ready product and as translation process carried out by the learners themselves — can help learners to realize the relevant differentiations, if only by making them note the corresponding variations which are found in their native language but are seldom consciously perceived. Cases of various kinds of untranslatability, semantic, syntactic or purely pragmatic, often prove equally instructive. Semantic equivalents do not always fulfil the requirements of functional equivalence in particular contexts. In other words, total interlingual translation often implies choice between possible semantic equivalents, which is the crucial problem of rhetoric and a necessary preliminary for appreciating the manifold possibilities of using language as a medium of art. It would require vast research to arrive at any methodological implications concerning this problem; in this place, only its existence can be briefly signalled.

Relatively more investigation seems to have been carried out concerning the function of translation in testing. The place of translation tests in advanced teaching is recognized by numerous authors (cf. Valette 1967, Bennett 1968). While there exist better techniques to check reading

knowledge, translation can be used to test vocabulary and especially words in context, i.e. conventional usage. When they involve no vocabulary problems, translation tests can also serve to test grammatical structures. It must be remembered, however, that it is chiefly the ability to translate that is tested, and not any of the basic linguistic skills. Moreover, advanced translation tests are extremely difficult both to set and perform. On the one hand, the number of possible translation equivalents grows with the degree of sophistication, due both to ambiguity of various types and to the language varieties involved. On the other hand, inadequate knowledge on the part of the learners leads to relative untranslatability caused by various factors of the context. Such — and similar — problems occur in factual translation. Literary translation, the subject of study of a separate discipline, presents such a vast range of problems that it does not seem possible even to try to list them here. In a regular, non-specialized language course there seems to be no place for it at all, except as an occasional refined exercise in style at very advanced stages, i.e. at a nearly bilingual level of proficiency. Therefore, when using translation as a proficiency or achievement test, it must be carefully observed that the text chosen

1. requires factual and not literary rendering, i.e. all semantic equivalents are functional equivalents,
2. avoids all types of ambiguity and untranslatability.

These requirements fulfilled, translation into L_2, i.e. contrary to translation for instruction, proves more informative, because the element of guessing is eliminated and the synthetic code, more difficult to achieve, tested.

The complexity of the problem, inadequacy of theoretical research and lack of adequate evidence, as well as practical considerations, make it impossible to offer in this place anything more than a very tentative and very random review of the questions and insights which emerge when any attempt is made to define the function of translation in modern foreign language teaching. Any conclusions following from this discussion must also be, of necessity, highly tentative. It seems, however, that total rejection of translation as a teaching-tool or testing technique would deprive the teacher of a device which, when used appropriately and in accordance with the principles and requirements of modern methodology, can prove very useful. Nevertheless, it must be remembered that the function of translation as a teaching-tool greatly depends on the proficiency of the learners and that these two variables — the amount of translation used in classroom practice and the level of learners — are directly and not inversely proportional.

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